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JRC SCIENCE AND POLICY REPORT

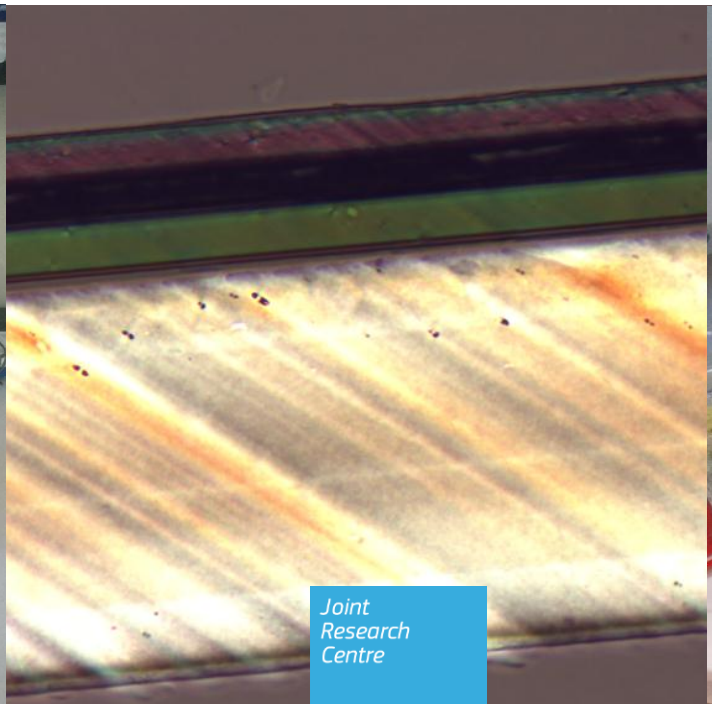
Annual report 2014 of the EURL-FCM

on activities carried out for the implementation of Regulation (EC) no 882/2004

EURL
European Union Reference Laboratory
for Food Contact Materials

Catherine Simoneau

2015



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Abstract

This annual report presents the activities of the EURL FCM in 2014 under the Administrative Agreement N °SANCO 2014/FOOD SAFETY/083-Food Contact Materials" (Ref. JRC: 33483 EURL FCM IX).
The work programme 2014 for the European Union Reference Laboratory for Food Contact Materials was established in consensus with the Network of National Reference Laboratories (NRLs) and DG Consumers and Food Safety (SANTE).
The JRC organised five Interlaboratory comparisons (dry foods, identification of polymers, metals from plastics, metals from ceramics, surface area). It developed new tests for ceramics towards future limits. It produced a guidance on surface measurements and compliance. It organised 2 trainings on exposure to food chemicals and on upcoming JRC migration testing guidelines for the Regulation on plastics (EU) 10/2011. It developed a repository of more than 400 substances and 300+ methods to improve compliance of substances under Reg. (EU) 10/2011.

EC-JRC-IHCP, CAT Unit

2015

EURL Food Contact Materials

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Executive summary

This annual report presents the activities of the EURL FCM in 2014 under the Administrative Agreement N°SANCO 2014/FOOD SAFETY/083-Food Contact Materials.

The work programme 2014 for the European Union Reference Laboratory for Food Contact Materials (FCMs) was established in consensus with the Network of National Reference Laboratories (NRLs) and DG Consumers and Food Safety (SANTE). It included developments on testing for ceramics in support to the revisions currently discussed for the Directive on ceramics. It also included 1) a first time proficiency testing (PT) on the quantification of metals released from plastics, 2) an exercise on the measurement of metals released from ceramics articles, 3) a follow-up PT to the 2013 1st time PT on quantification of cocktails migrants from simulant for dry foodstuffs established in Regulation (EU) 10/2011, 4) a PT on identification of the nature of multilayers in plastics FCM materials, 5) a follow-up PT on the calculation of surface areas in contact for kitchen utensils using different methods and 6) a workshop on the upcoming technical guidelines on migration testing. In addition continuing work items included the development of a databank for substances regulated under the Regulation 10/2011 for plastics as well as the development of an inventory of methods of analysis. The report also includes previously set performance indicators comparing the achieved with the planned outcomes and deliverables. In general, the EURL FCM has achieved the ex-ante objectives and delivered as planned.

Background

The European Commission Joint Research Centre (JRC) is the European Union Reference Laboratory for Food Contact Materials (EURL FCM) hosted in the Chemical Assessment and Testing Unit of the Institute for Health and Consumer Protection. The unit has currently 44 staff members of which 11 were in 2014 executing tasks primarily linked to the EURL and related food contact activities for DG SANTE.

In accordance with its mission statement, different units in the JRC provide scientific and technical support to the policy development and implementation of the EU's regulatory framework for Food Contact Materials (FCMs). Amongst others the policy support includes the operation of the EURL-FCM. Its legal mandate is defined by Reg. (EC) No 882/2004 on official feed and food controls (OFFC). It is implemented by an administrative arrangement (AA). The EURL FCM contributes to the implementation of the OFFC Regulation through development, validation of methods and proficiency testing for migration from FCMs together with provision of methods to NRLs, and by coordinating the network of FCM-National Reference Laboratories (NRLs) and potentially official control laboratories (OCLs) throughout the EU , ensuring their consistent performance.

The EURL is supported by the European Network of FCM Laboratories that includes NRLs throughout the EU, as well as Switzerland and Norway. Currently NRL-Malta is represented by NRL-UK, NRL-NO is represented by NRL-DK.

In line with its mission, the JRC covers some activities of the EURL-FCM from its own budget along with the financial support from an administrative arrangement, similar to other EURLs for food and feed listed in Regulation (EC) No 882/2004.

This report represents the summary of the deliverables under the Administrative Agreement N °SANCO 2014/FOOD SAFETY/083-Food Contact Materials and covers all activities of the EURL, co-financed or not by this AA. It follows the structure defined by the "Performance indicators for the EURLs in the field of Food and Feed" as defined previously by DG SANCO [now DG SANTE].

1 – Coordination of analytical methods by comparative testing

The mandate is to provide NRLs/OCLs with details of analytical methods, including reference methods and coordinating their application by the NRLs/OCLs, in particular by organising comparative testing and by ensuring an appropriate follow-ups of such comparative tests in accordance with internationally accepted protocols.

Development of methods in support to a new regulation for ceramics and glass

The Directive 84/500 on ceramic materials and articles is intended to become under revision. Under this revision a significant reduction of the limits for lead and cadmium is foreseen. DG SANTE highlighted to Member States that amendment(s) to EU legislation with reduction of the existing limits may imply the need for changes in methodology, and entrusted the EURL-FCM to undertake work to provide sound data and assess the feasibility for compliance and enforceability of the foreseen measures. The regulation of other metals through introduction of migration limits may need to be considered as well. In addition, crystalware may be brought into the scope of the regulation. The development of methods for lead and cadmium from ceramic materials and articles should anticipate such future changes.

The purpose of the work in 2014 by the EURL-FCM was anticipatory in nature and focused on evaluating /comparing /developing methods and included two workshops. The work aimed to be done in consensus with the stakeholders and volunteer NRLs and to focus on the investigation of the nature and extent of release from different products currently on the market as well as on methods to tackle much lower limits and of test conditions for migration testing.

A **dedicated Circabc website** was created to host the reports, presentation and results for an open group of stakeholders.

The **3rd workshop** on technical work to anticipate a new EU legislation on Ceramics took place on June 10th 2014. The workshop was co-organised by DG SANTE and JRC with the stakeholders to plan a strategy as update to the work progress from JRC and planning to strategies and on-going work on ceramics. The meeting included presentations on work done by different stakeholders including the EURL FCM (JRC), NRL-Belgium, NRL Greece , European Federation of cookware, cutlery and housewares (FEC), the Glass Research Centre

(SSV), Lucideon (previously CERAM). A short summary report was done and circulated to the participants and placed on the CIrcabc website.

The EURL-FCM anchored further **collaborations with the professional associations** for the supply of samples. More than 4500 test pieces representing more than 150 types of articles were donated by the industries and professional associations towards the project and are currently under testing.

A **4th workshop** was organised in December 10th 2014. This workshop briefed the stakeholders on the full experimental results generated by the JRC. The workshop also served to exchange information for the further work planning. The report of the meeting was completed and circulated in preparation for next workshop foreseen in June.

Experimental work was also conducted: the work was articulated around a number of deliverables targeting different aspects: 1) interlaboratory comparison of methods for quantification of metals towards new limits for selected metals from ceramics, (see section on ILCs), 2) the development of methods and investigations on the release of metals from ceramics articles, 3) development of methods to investigate migration form crystalware, and 4) comparisons of methods for testing the rim.

The progress of the experimental work was reported in individual reports. Experiments were conducted on samples from the market as well as samples provided by stakeholders. Samples of both hollowware and flatware were investigated. The analytical methods using ICP-MS for identification and quantification were investigated in order to provide data towards harmonisation of existing or newly developed protocols. Migration tests were performed in two food simulants: acetic acid 4% and citric acid 0.5%. The first simulant represents the classical simulant for acidic foods under the EU legislation for ceramics as well as in standard tests for a large number of countries worldwide. Citric acid corresponds to a simulant that has recently been adopted by the Council of Europe for metals and alloys in contact with foods and thus was also included in the preliminary studies as another base for comparisons, since it is also a common food acid and frequently used as food additive (E330). In the study, the results of multiple migrations (corresponding to the regime of repeat use) were considered. In addition, a number of investigations were conducted on tomato sauce/puree as a worst case food for ceramics to serve as potential helpful data in terms of relating to exposure assessments, as well as on wine for crystalware. The individual parts of the investigations are summarised below. Based on the results, a validation at EU level may be planned in collaboration with ISO TC166 to generate a new reference method.

Development of a migration test from flatware and hollowware for ceramics

The planned focus was on lead and cadmium since those are affected for the revision of the Directive EC 84/500/EEC. In the implementation phase the scope was extended to cover more metals than foresee in the ex-ante plan in order to provide a better overview. Due to the much lower intended limits, the development of new tests focused on including repeat use (i.e. 3 migration tests for enforcement/compliance) into migration simulant solutions. It targeted migration from ceramics. The work was done in cooperation with the professional associations which agreed to the responsibility of providing adequate test samples and materials for the development and validation phases. The tests also planned to initiate

duplicate experiments with a limited number of laboratories to generate more data. This was accomplished with the kind volunteer cooperation from NRL-BE (ISP), NRL-UK (FERA) and NRL-DE (BfR). The work progress is reported in the following deliverable:

*Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - **Part 1: Release of Metals from Ceramic Articles**, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine, (EUR 27179 EN, ISSN 1831-942, ISBN 978-92-79-47229-9; DOI: 10.2788/308200, Publications Office of the European Union, Luxembourg).*

Development of a migration test from flatware and hollowware for crystalware

Currently there is no specific EU legislation with tests for crystal. The planned focus was lead considering the nature of the products. It included testing both on wine and on the simulant(s). It included multiple-use testing regime. The work was done in cooperation with the professional associations which agreed to the responsibility of providing adequate test samples and materials for the development and validation phases. The work progress is reported in the following deliverable:

*Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - **Part 2: Release of Metals from Crystal Glass Articles**, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine (EUR 27180 EN, ISSN 1831-9424; ISBN 978-92-79-47230-5; DOI 10.2788/885263, Publications Office of the European Union, Luxembourg).*

Development of a new migration test of rim

Currently there is no specific provision stipulated in the EU legislation for testing the rim of hollowware articles. The intention of the amendment is to include limits also for the rim, which implies the development of an internationally agreed test. The planned focus was on lead and cadmium, yet we also included other metals where applicable to increase the potential of the investigations. A review of worldwide testing approaches was conducted, which led to two main protocols upon which were systematically compared on all samples for which rim could be tested. Systematic experimental comparisons were conducted. The work is reported in the following deliverable:

*Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - **Part 3: Release of Metals from the Lip Rim Area of Externally Decorated Articles**, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine (EUR 27178 EN, ISSN 1831-9424; ISBN 978-92-79-47228-2; DOI 10.2788/484454, Publications Office of the European Union, Luxembourg).*

Interlaboratory comparisons (ILCs) and follow ups

ILC 2014_001: follow up for the correct use of food simulant E

Regulation (EU) No 10/2011 established poly (2,6-diphenyl-p-phenylene oxide, PPPO) as a food simulant E for testing specific migration into dry foodstuffs. A validation of method took place in 2012 and a PT was organised in 2013. Since this was the first ILC of this type for NRLs a follow up was required because of the difficulty of the exercise and the wide range of proficiencies. The 2014 exercise included the creation of a new test material similar to that of 2013 to allow underperforming laboratories to achieve an adequate proficiency and to be

able in turn to train their official controls. The aim was 5 substances, and the final ILC extended to 7 substances. The full results are reported in the following deliverables:

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials. ILC01-2014 – Follow-up ILC01-2013 on Proficiency Testing on Food Simulant E containing a cocktail of potential migrant substances, Silva Félix Juliana, Simoneau Catherine (EUR Number 27166; ISSN 1831-9424; ISBN 978-92-79-47122-3; DOI 10.2788/455286, Publications Office of the European Union, Luxembourg).

Optimisation of a novel analytical method and results from the interlaboratory comparison of the determination of BHT, BP, DiBP, DEHA and DINCH in new food simulant E, (poly (2,6-diphenyl phenylene oxide, PPPO)- Food Additives and Contaminants - Part A Chemistry, Analysis, Control, Exposure and Risk Assessment (2014, 01/2014; DOI:10.1080/19440049.2013.874046

The exercise demonstrated improved performance in using simulant E for compliance with specific migration from dry foodstuffs and provided recommendations for use which will be further elaborated in the form of a scientific publication.

ILC 2014_002: Follow up PT on identification of polymers

A PT was organised in 2013 which for the first time aimed at estimating performance of qualitative analysis. The aim of the exercise was to test the laboratories' ability to identify unknown plastics materials. There are currently no reference methods and the results demonstrated a spread and some level of difficulty for laboratories to identifying particularly multilayer materials. A follow up was organised in 2014. The planned activity focused on 2-3 multilayers, and the achieved activity included 3 materials. The results not only included a proficiency testing but included a review of both PTs to derive compilation of methods and recommendations for qualitative methods and reporting of results for these essential screening tools. The full results can be found in the deliverable:

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials - ILC 02 2014 – Identifying the composition of multilayer plastic packaging films, Mieth Anja, Catherine Simoneau (EUR Number 27175 EN; ISSN 1831-9424; ISBN 978-92-79-47231-2; DOI10.2788/95936, Publications Office of the European Union, Luxembourg).

ILC 2014_003: Metals from plastics according to Regulation 10/2011

Regulation (EU) No 10/2011 establishes new limits for metals migrating from plastics. No methods are available from CEN or other sources as reference or internationally agreed. The objectives of the 2014 exercise focused on assessing the performance of laboratories and support a potential future validation for this new mandatory testing for metals regarding specific migration from plastics. In this exercise, 5 to 7 metals were planned originally. In the final study 8 metals were included, including a challenge/mystery metal for which the identity was not disclosed. Therefore this exercise also ended up testing the ability of NRLs to screen for unknown metals as well as quantify series of 7 regulated metals regulated and present in targeted levels most relevant for compliance testing. The general aim of the exercise was to test for the first time the proficiency of the official control laboratories and consequently the participants were free to use any analytical method of their choice. The full study is reported in the following deliverable:

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials - ILC 03 2014 – Elements from Food Contact Materials; ***Part 1: Plastic*** *// Part 2: Ceramic, Beldì Giorgia, Peltzer Mercedes, Simoneau Catherine, (EUR Number 27167 EN; ISSN 1831-9424; ISBN 978-92-79-47123-0; DOI 10.2788/1849, Publications Office of the European Union, Luxembourg).)*

ILC 2014_004: Validation of method towards new limits for selected metals from ceramics.

The planned focus ex-ante at the inception of the workprogramme was limited to lead and cadmium since those are the ones first affected for the revision of the Directive EC 84/500/EEC. Due to the much lower intended limits, the validation was conducted directly to values close to the discussion starting values. The validation aimed to be opened to NRLs, but was extended during the development of the work also to official controls labs. The z-scores demonstrated that the analytical determination was not an issue even at much lower levels than the current limits. The results can be found in the deliverable:

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials - ILC 03 2014 – Elements from Food Contact Materials; Part 1: Plastic // ***Part 2: Ceramic,*** *Beldì Giorgia, Peltzer Mercedes, Simoneau Catherine, (EUR Number 27167 EN; ISSN 1831-9424; ISBN 978-92-79-47123-0; DOI 10.2788/1849, Publications Office of the European Union, Luxembourg).)*

ILC 2014_005: Follow up PT for surface area

Results of compliance tests need to be expressed in relevant cases on the basis of the surface in contact with foods. Therefore the reliability of results may directly depend on the correct measurement of the surface area. A first-time ILC on the determination of the contact area of kitchen utensils was conducted in 2013 which highlighted some shortcomings. A follow up was therefore organised which included not only an new exercise but also an evaluation of the final impact of this uncertainty on the overall evaluation of compliance vs. non-compliance and recommendations to improve the uncertainty currently associated with specific migration results. The full results can be found in the specific deliverable:

Critical aspects in the determination of the surface in contact with foods for migration testing of kitchen utensils: Results from two investigations by interlaboratory comparisons organised by the European Reference Laboratory for food contact materials Mieth Anja; Hoekstra Eddo; Simoneau Catherine; EUR 27007 EN, ISSN 1831-9424, ISBN 978-92-79-44674-0, DOI 10.2788/039475, Publications Office of the European Union, Luxembourg).

Performance indicators

The quality processes governing the functioning and evaluation of performance of the EURLs in food safety involve the setting of performance indicators that are set at the inception of the development of the work programme (ex-ante). Upon completion of the yearly work programme, these indicators are reviewed to assess that the body of deliverables are satisfactory both in terms of breadth and achievements.

FF.PT.1 Number of comparative tests following internationally standardized criteria (“high quality comparative tests”) to be organised: : ex-ante planned for 5 ILCs, and 5 were fully achieved.

FF.PT.2 complexity of each PT[1]:

	Ex-ante	Ex-post	Comments
ILC-01	Quantification of 5 substances	Quantification of 7 undisclosed from a list of 10	Achieved beyond planned.
ILC-02	Identification of each layers in multilayers without priori disclosure of any information of the nature of polymeric materials,	Three different multilayer samples. Participants were asked to locate and identify all plastic polymer films and to locate adhesives and printings. If the samples contained an aluminium layer, they were requested to locate the aluminium layer and to specify whether the layer consisted of an aluminium foil or an aluminium vapour coating.	Achieved, with level of specificity of information required greater than planned (included also between layers adhesives or print)
ILC-03	First PT of its kind on the newly regulated metals in Reg. 10/2011 (6-7 metals simultaneously)	7 metals plus in addition a mystery metals of undisclosed nature (antimony)	Achieved beyond planned.
ILC-04	First attempts to identify and quantify metals (e.g. 6) that could be released from ceramics in a multianalyte approach	8 metals chosen as representative of ceramics, in release values in the range of the new intended values (taking into account both DG SANTE and Council of Europe where applicable).	Achieved beyond planned.
ILC-05	technical guidance for official controls for the measurement of surface area will be produced as results of follow up by root cause	The study included results from ILCs + questionnaires. It also included a voluntary exercise on the determination of the envelope volume which constitutes a different technique to estimate contact with foods. Underpinning reasons and issues in the determination of surface and the envelope volume measurements were identified. Recommendations were derived	Achieved, further exercise as final check additional achievement

FF:PT.3 success rate of PT

Average rates of NRL success (share of NRLs that are expected to meet all the test thresholds) in relation to PT's grade of complexity and methods and activities to ensure follow-up of poor results

FF.PT.4 Progress (direct after training or based on past few years' experience) made by NRLs on similar comparative tests with possible discussion of influential factors (factors that can be influenced by the EURL and factors that cannot be influenced)

	Ex-ante	Ex-post	Comments
ILC-01	target **improvement** by **10%**	Participation 2013: 79% (23/29) Performance 2013: 48% (11/ 23) could identify correctly all the 7 substances. 32% (7/22) could also quantify them satisfactorily (z-scores ≤ 2). ILC2014 (with 3 substances never tested before) Participation 2014: 81% (29/36) including NRLs and OCLs Performance 2014: 76% (22/ 29) could identify correctly all the 7 substances. 66% (19/29) could also quantify them satisfactorily (z-scores ≤ 2).	Achieved beyond planned. **Improvement** close to **30% on identification** Improvement **> 30% on quantification** compared to the previous ILC01-2013.
ILC-02	N/A: NO standard/ validated methods	27 laboratories (87.1%) had a satisfying overall performance. This represents an improvement compared to 2013 where only 73.1% of the participants had obtained satisfactory level (i.e at least 50% of the total achievable points in the analysis of the multilayer samples).	**Improvement** close to **15% on identification**
ILC-03	N/A: never attempted before.	The rate of success was higher than 90% for all elements in both simulants	Achieved beyond planned for participation (56 labs) and success (90%) .
ILC-04	N/A: never attempted before	The ILC demonstrated that it was possible to show satisfactory laboratory performance of the appointed NRLs and OCLs laboratories to determine Pb and Cd at concentration levels much lower than current levels from directive 84/500/EEC. It also demonstrated and also their ability to determine successfully other metals such as Ba, Co, Mn, Ni, As and Al, which are potentially released from ceramic articles.	Achieved.
ILC-05	n/a (guidelines)	Underpinning reasons and issues in the determination of surface and the envelope volume measurements were identified. Recommendations were derived	Achieved, , further exercise as final check additional achievement

[1] 1 - easy matrix, solution with analyte, one single easy analyte (relative high concentration) whose identity is shared with the participants; 2 - more challenging analytes, concentrations , matrices; 3 - more complex combination of analytes, concentrations and matrices whose identity is not disclosed to the participants, innovative substances, a mix of analytes either in the same matrix or in different matrices

2 – Production of analytical methods

Regulation (EC) No 1935/2004 supports the food safety for food contact materials. For plastics Regulation 10/2011 represents > 900 chemicals. Yet, only 28 substances have a CEN method, and candidate methods from petitioners can only be found for less than 20% of the substances. This project aims to develop a cost effective approach for testing compliance for Reg. 10/2011. The project develops sources for calibrants, develop a database of analytical methods for authorised FCM substances. The work is a continuation of activities.

New database of complete descriptions of methods of analysis

The objective was to create a database of analytical methods from relevant petitioners' dossiers for substances regulated under Reg. 10/2011 for which JRC can obtain from the information (e.g. as per Note for guidance from EFSA). Method descriptions available from SCF- SANTE archives had been previously obtained. Those only available as printout had been scanned and text-recognised. A new approach was developed in 2014 to extract the methods directly from the petitioners' dossiers in the EFSA intranet database. The list of regulated substances under Regulation (EU) No 10/2011 was compared to the methods available and EFSA petitions. The available EFSA petitions were reviewed to collect and extract where possible the method descriptions. The work also included the two amendments of the Plastics regulations (1183/2012, 1282/2011). All methods found were compiled into an excel database format now holding the references to 321 methods. The full results can be found in the specific deliverable:

Availability of methods for the analysis of substances regulated under Regulation (EU) No 10/2011, Simoneau Catherine; Alberto Lopes Joao; JRC93876 (technical report)

This can provide the basis for further discussion and action at level of the working party with member states and stakeholders on whether the enforceability of those substances is feasible or not.

Repository of reference calibrants of regulated substances

The objective is to provide sources of substances regulated in the EU for FCM for ad-hoc provision to official controls upon request. Work was initiated to establish sources of analytical standards required as calibrants for the enforcement of Regulation (EU) No 10/2011. A new repository of current substances was created for monomers, additives and starting substances. More than 450 substances have been collected or purchased. The results have been integrated into the database repository available for methods (Annex 1). The substances in the database have all been purchased or obtained from their corresponding petitions and represents all commercial and /or analytical sources of substances for FCM currently available. A call for collaboration will be initiated with the industrial association of chemicals related to food contact materials (e.g. CEFIC) for those missing. The positive list (latest version in our possession) lists 933 total substances. Out of these, we successfully traced the commercial provision of 369 substances (we purchased 380, of which we had also 11 from petitioners' applications). We had received independently 128 substances from petitioners submitting for evaluation to EFSA the required sample to JRC. This constitutes a source of 497 trusted substances as calibrants. These are also physically present in our repository and can be characterised in the future to generate MS

characterisation spectra. In addition our former collection (although quite old), contained 76 substances (but of untrusted value). This means that 360 substances are absolutely missing and ideally 436 substances should be obtained (of which 10 would be gaseous) as listed in Annex 2. The work highlighted that close to 450 substances that are currently on the positive list have NO information on commercial or analytical supply.

Web portal for methods and sources of calibrants

The current listing of database of information on suppliers of calibrants and for methods will be transferred into a web accessible portal. It will link systematically the database of substance characteristics and availability to the database of methods, to provide a one-stop portal. This portal will become on-line and searchable. This is on-going as the web platforms available to commission services are being restructured.

Provision of calibrants to NRLs where needed

This work item consists in the provision of sources of substances regulated in the EU for FCM for ad-hoc provision to official controls upon request. This is achieved thanks to the repository bank of monomers, additives and starting substances as well as a database of information on suppliers of calibrants. Substances not available commercially to use as standard calibrants were prepared and sent upon request to NRLs and other stakeholders (if present in the reference collections), for research or enforcement purposes under approved programmes were. The requests (n=6) have all been met timely.

Development work for multi-analyte methods

There are more than 900 regulated substances under Regulation (EU) No 10/2011, whereas only 28 methods have had a restricted validation under CEN. There are notably no official methods, no Codex methods, and very little validated methods with full data traceability. There is therefore a need to develop strategies towards non-targeted sample preparation and multianalyte analytical methods. This project aims to develop a cost effective approach for testing compliance for Reg. 10/2011. In 2014 the work focused on compiling the analytical methods according to key parameters. All the substances listed in the databank of the EURL FCM had the method of analysis also listed. The establishment of key parameters was also established and for each substance/method the corresponding classifiers (e.g solubility, polarity, and other physicochemical characteristics) was collected. This allows developing clustering of methods/substances for multianalyte analysis. The resulting table is integrated in the master table of Annex 1.

Performance indicators

FF.PT5 and FF. ANA.1 Availability for use by NRLs of methods by the EURL, (e.g. creation of **central databank of method** descriptions), analytical methods obtained or developed by the EURL and disseminated to NRLs

FF.ANA.2 Number of calibrants retraced from analytical sources or obtained by the EURL

Ex-ante	Ex-post	Evaluation/comment
Target will to reach 200 methods in this phase. - development of a database of methods description. - link systematically to availability of calibration chemicals	Collection achieved in 2014: 321 methods, Availability of chemicals reported	Achieved beyond target
Target 70% of the 900+ substances regulated at EU	497; ca 53%	Substances **cannot** be found available from commercial or official sources

This work has effectively enabled a basis for discussion and action at level of the professional associations/stakeholders and to the working party with member states. The next steps are to collaborate directly with CEFIC and its members to establish the supply of substances that are currently regulated but not found from any source. The statistics on provision of substances that were submitted for petitions to EFSA for which the JRC should have received samples should be further investigated to what extent some substances which should be sent to the JRC according to the model letter of the note for guidance are not always sent by the petitioners.

3 – Training and support to NRLs

The scope of the work item is to conduct initial and further training courses/staff exchanges for the benefit of staff from NRLs and of experts from third countries; The EURLFCM held the two planned workshops in 2014.

The June workshop served to strengthen the structure of the network and to identify the needs of the NRLs. Specific topics concerning the specific analysis of FCMs were addressed during the workshops. The agenda included the preparation of the work programme 2015, developments of ILCs and follow-ups of ILCs. It also included a session of general exchange of information and information with presentations from several NRLs.

Deliverable: Report of the 21st plenary workshop of the European Union Reference Laboratory for Food Contact Materials: Ispra, 4-5 June 2014, Simoneau Catherine; Bradley Emma; Raffael Barbara; Silva Felix Juliana; Mieth Anja; Beldi Giorgia; Peltzer Mercedes Ana; Hoekstra Eddo; Milana Maria Rosaria; Sauvegrain Patrick; Raffael Barbara; Van Hoeck Els; Kappenstein Oliver. JRC91835, Ares(2014)1541586.

The October plenary included a full briefing on ceramics. It presented the progress of JRC work on new or updated methods.

A special workshop was held on training on food contact compliance for plastics. European legislation on food contact materials is long standing and has become extensive for plastics. The JRC has been entrusted to develop the technical guidelines supporting migration testing under Regulation (EU) No 10/2011. This work was finalised in 2014 and therefore the workshop was planned to provide priority briefing for NRLs in these developments to enable them to provide the most state of the art advice to their competent authorities and stakeholders.

In addition an extra workshop was added to the October workshop to present a training on the FACET tool.

Deliverables

Training on Food Contact Materials in the frame of the EU-China Trade Project to Chinese delegation on Study Assignment on Food Contact Materials, Simoneau Catherine; Hoekstra Eddo; JRC91841

Training workshop "Safety of food contact materials: Technical Guidelines for Testing Migration under Regulation EU No 10/2011", Hoekstra Eddo; Hannaert Philippe; Bradley Emma; BRANDSCH Rainer; Bustos Juana; Dainelli Dario; Faust Birgit; Franz Roland; Kappenstein Oliver; Rijk Rinus; Simoneau Catherine; Vints Mark; EUR 27055 EN, ISSN 1831-9424, ISBN 978-92-79-45030-3, DOI 10.2788/377927, Publications Office of the European Union, Luxembourg.

Training workshop "Safety of food contact materials: exposure assessment of chemicals in foods and the use of FACET for exposure assessment" 2014, KELLY Seamus, CONNOLLY Aileen, EUR 27020 EN, Simoneau Catherine, Hannaert Philippe (eds), ISSN 1831-9424, ISBN 978-92-79-44703-7, DOI 10.2788/489333, Publications Office of the European Union, Luxembourg.

Proceedings of the 22nd plenary workshop of the European Union Reference Laboratory for Food Contact Materials - Ispra, 9 October 2014 Simoneau Catherine; Silva Felix Juliana; Mieth Anja; Beldi Giorgia; Peltzer Mercedes Ana; Hoekstra Eddo; Hannaert Philippe; Alberto Lopes Joao; Biedermann Maurus; Simoneau Catherine; Bradley Emma; JRC93316, Ref. Ares(2014)388767 - 17/02/2014

Performance indicators

FF.NRL.1 Number of participating NRLs in the annual workshop (attendance rate)

Plenary (annual workshops, n=2): June: Ex ante: 70% - ex Post 29 NRLs out of 32 (>90% attendance).
October: Ex ante: 70% - ex Post 29 NRLs out of 32 (>90% attendance).

FF.NRL.2 Number of positive satisfaction surveys above 85% received for the annual workshop

Plenary (annual workshops, n=2): June: Ex ante: 90% - ex Post 97%
October: Ex ante: 70% - ex Post 97% (included in set of workshops)

FF.NRL.3 Measures to address relevant negative feedback from satisfaction surveys

- Specific questionnaire and periodical polls Identification of gaps and wishes, dialogue / forum in the plenary, choice of activities and priorities and WP,
- functional mailbox /e-mails;
- NRLs are polled on wishes for agenda items which are taken into the plenaries

FF.NRL.4 Number of NRLs visited for training

Ex-ante: actions foreseen 1) a questionnaire of root cause analysis, 2) dialogue with NRLs concerned 3) a repeat exercise for NRLs underperforming 4) a provision for visiting either on location or to train at EURL for remaining underperforming ones upon completion of the exercise. with a >10% improvement is expected from those actions.
Ex-post:
1) Questionnaires for ILC 002, ILC 001, ILC005 for root cause analysis,
2) Informal Q&A with NRLs
3) New exercise for ILC001, ILC002, ILC 005 with clear demonstration of improvement.
4) No request of visit received (since improvement demonstrated easily)
More than 10% improvement achieved in all cases.
In addition: request for visit of high level Chinese delegation. Reported in
http://www.euctp.org/jdownloads/Agriculture%20and%20Food%20Safety%20%20ae/Harmonisation%20of%20risk%20analysis%20standards%20and%20management%20of%20food%20contact%20materials%20FCM%20A325-C3/euctp_bar_a325c3.pdf
and http://www.cfsa.net.cn/Article/News.aspx?id=9C8F3D82F28CAA3D80AB22A68F773583865BE28AAA6A9040

FF.NRL.5 Number of workshops/trainings to be organised other than the annual workshop

Ex-ante: A workshop on the new migration testing guidelines developed by JRC and the task force of experts on behalf of DG SANCO in support of Regulation 10/2011.
Ex-post: Workshop on the migration testing completed, In addition an extra workshop was added to the October workshop to present a training on the FACET tool.

FF.NRL.6 Attendance rate and number of positive satisfaction surveys above 85% received for such workshops

Ex-ante: 90% received survey will be positive satisfaction surveys
Ex-post: 97% for the migration testing training; 100% for the FACET training (reported in full in the individual reports)

4- Provision of expertise to Commission, member states, NRLs

The activity included providing support to DG SANTE in technical matters concerning analytical methodologies for food contact materials when requested, participating in DG SANTE Working Groups (WG) meetings or other Commission WGs where indicated, performing research activities in support to commission e.g. Ceramics, modelling, guidance to Regulation (EU) 10/2011. It included participation to the newly formed EFSA Food Ingredient and Packaging (FIP) Unit network to present the work on ceramics. Finally it provided information and advice on the use and training opportunities of the FACET RTD tool for the exposure assessment of contaminants from food contact materials. Indeed in this area a full training was organised (see previous section). The deliverables can be seen in the section outputs.

The activity also provided support by means of information and technical advice to NRLs. The work included maintaining close awareness of developments in methodologies, give advice, as relevant, at the Annual Plenaries, Workshops and on an ad-hoc basis. In addition the EURL-FCM also liaised with NRLs via e-mail and via the Circabc platform.

No requests for training of laboratory personnel from NRLs were received. The ad-hoc questions the EURL or JRC FCM staff received were as follows: about 40-50 emails were received regarding information on FCM legislation (±50%), analytical methods (±25%), availability of standards (±25%) etc.

5- Reciprocal exchange of information with professional bodies and stakeholders (CEN/ISO, websites, conferences etc)

Providing support to standardisation bodies such as CEN for the standardisation of analytical methods for the determination of migrants from food contact materials. This can require a regular participation in the meetings of CEN TC 172/WG3 and CEN TC194/SC1 WGs and ISO TC 166 where applicable.

The web portal http://ihcp.jrc.ec.europa.eu/our_labs/eurl_food_c_m was uprooted, revised, updated and migrated to the new Commission platform called the science hub (under https://ec.europa.eu/jrc/en). The activities on FCM are now under the link https://ec.europa.eu/jrc/en/research-topic/food-contact-materials and the site specific to the EURL can be found at https://ec.europa.eu/jrc/en/eurl/food-contact-materials.

The science hub platform supports the public dissemination of the work on food contact and serves as a reference, contact and service point for laboratories involved in the analysis of food contact materials in Europe and worldwide. The website holds information about the activities and events carried out by the EURL-FCM as well as published reports available and scientific papers. The Network of NRLs is also emphasized. The tabs are 1) Legislation 2) Network laboratories 3) Technical guidelines 4) Interlaboratory comparisons 5) Test methods 6) Substance database 7) Research (including a sub-tab for Publications), 9) Training and workshops 10) Links 11) Contacts.

A new **functional mailbox** was created JRC-FCM@ec.europa.eu to serve as **help desk** for questions.

The **dedicated website on Circabc specifically for NRLs** is designed to support dissemination of information and network activities https://circabc.europa.eu/ under Joint Research Centre, JRC EURL-FCM. The platform represents a main source of information exchange between the EURLs and the NRLs as well as is used for repository of working documents and traceability purposes. It also holds forms, sheets and other documents thus facilitating the management of tasks. It was periodically updated. It also updated the permanent list of NRLs contacts. In the CIRCABC interest group EURL-FCM an additional group for a Ceramic open working group was created. These were updated following the meetings.

The activities also promoted invited participation/presentation of EURL activities in international conferences in the field (see in section outputs).

Reports from activities and presentations

See in section outputs.

Performance indicators

The mandate of the EURL-FCM implies also to carry out a mutual and reciprocal exchange of information with competent laboratories in third countries, to international institutes, or to CEN/ISO standardisation of analytical methods.

An indicator (FF.CEN.1) measures the provision of consultant expertise to third country laboratories (number of questions or requests), advisory to institutes or international projects, or tutoring of visitors for training, bilateral meetings or exchange of information. More than 10 questions were expected ex-ante, as well as an undefined number of ad-hoc questions upon request for third countries. This number was well exceeded (see section above). The EURL has also implemented in 2014 a new functional mailbox for all stakeholders and established quality criteria for promptness (15 days) and quality of replies (acknowledgement of the help by stakeholders). The JRC has also obtained an internal grant for special participation from E&I funds to the workshop on migration testing and that of FACET (thus financing the candidates participants that wish to take part in the training). The EURL has also a prominent place as highlight for visitors of the JRC and in light of the Universal expo 2015.

A second indicator (FF.CEN.2) measures participation for the CEN/ISO standardisation of analytical methods. Currently the JRC as EURL FCM is involved in TC 172- paper and board (participation since 2011) as well as in TC 194 (participation/chairing since 1996) plastics when it will become active again. Participation in ISO TC 166 was received positively and was established in 2014. The first meeting took place in Paris on 26-27 January 2015 with a presentation of the JRC work on ceramics.

6 - General tasks

Operational procedures

Annual Report 2013

The annual report of the deliverables of the EURL-FCM for 2013 for DG SANTE and National Reference laboratories was completed as well as its financial report.

Submission of the WP 2015 of the EURL-FCM

The proposal workprogramme and associated budget for 2015 was timely submitted for the operation of the EURL-FCM.

Deliverable:

European Union Reference Laboratory for Food Contact Materials: Work programme 2015, Simoneau Catherine JRC91833 (technical publication)

Quality assurance and control

The Quality System (QS) implemented since 2003 continued overseeing, controlling and reporting the activities, ensuring they were executed timely and to the expected standards of excellence. It also made sure that the budget was properly allocated. Evaluation sheets as feedback from NRLs and Official Laboratories were collected when needed, as well as questionnaires and other relevant documents for traceability purposes.

Impact

The EURL plays a central role in the implementation of FCM legislation and in the quality and reliability of food control measures according to Reg. 882/2004. It ensures access to methods and standards for all stakeholders for and provides the means to ensure compliance and enforcement in harmonised manner. It allows a common interpretation of the EU legislation towards better consumer protection. This fosters confidence in products on the EU market.

The work with the Network of NRLs improves compliance performance and advice given at EU level. It serves to the preparation of international standards levelling the global trade. It also conciliates safety and innovation by identifying potential issues of new materials.

New methods improved compliance of the new food simulant E established in Regulation 10/2011: 1) a method was developed validated at EU level by the JRC, 2) proficiency testings were organised with remedial actions, ensuring that reliable compliance can occur at EU level, and better standards for Industry.

The development of new tests by JRC serves as basis to DG SANTE for the development of new limits for ceramics, domestic glassware, crystal tableware. Key collaborations with industries represented more than 4500 test specimens donated. The JRC investigated release under conditions of use and developed pragmatic testing protocols for controls and industries. Results showed that lower limits do not pose an analytical problem: However the current test with lower limits might pose trade issues for hand crafted products. This has enabled a second phase and JRC development of new tests mimicking better real use.

The proficiency tests of the EURL improved performance of NRLs by more than 30% in the last year, and in the previous ILCs on formaldehyde the improvement was 63% to 100% satisfactory and contributed to decrease in non-compliance of imports from 11% to 1-2%, thus smoothing the international trade. The trainings contributed to harmonising official controls in Europe. The satisfaction level from stakeholders was measured (97%-100%). The satisfaction of the work led to the 10th AA of the EURL for 2015.

Two performance indicators measure the ability into take into account of scientific development activities at national and EU level and perform applied research and development activities whenever appropriate. One indicator (FF.R&D.1) measures the number of high quality communication items to NRLs on follow-up of research other than analytical method-related. The ex-ante only considered the provision of information and /or briefings on the new tool for food chemical surveillance from the RTD EU project FACET. The ex-post reviews highlight (reports of June and October) that special speakers were invited to

make presentations by the EURL FCM within the plenaries to keep the NRLs abreast of all relevant developments in the field.

Preparedness

The EURL should have trained personnel available for emergency situations occurring within the Union (if appropriate) and to provide scientific and technical assistance to the Commission (and to EFSA), for expert technical /enforceability opinion, improvement of exchange of information and briefing to MS CA on support from and to NRLs, responding to MS CA and third countries queries on interpretation of technical information where need arise, establishing/verifying quality criteria for analytical data towards exposure assessment (EFSA), provide technical guidance to the correct implementation of the EU legislation, and in cases where the MS challenge the results of analyses.

An indicator (FF.COM.1) represents the number of qualified staff in terms of preparedness with relevant completed training able to travel, to assist during specific situations and/or to engage the EURL on-site. In 2014, the staff foreseen ex-ante matched the achieved ex-post. The staff comprised C. Simoneau (Operating manager). Permanent Staff dedicated to food contact for DG SANCO included 2 permanent researchers, and 3 permanent technical staff. Additional staff included a detached national expert. Temporary staff for the EURL consisted of 3 contracts. The work financed under the specific arrangement for the EURL covered a majority of the 3 grant holders. The permanent staff has 10 to 17 years for expertise on food contact and able to provide ad hoc contribution to DG SANTE but are not eligible to be covered under the EURL financial rules. 2 permanent staff are working specifically under accreditation ISO 17025 for the qualification of the EURL and one EURL contractual staff also does so. The EURL also has a functional mailbox for all stakeholders with quality criteria established for promptness (15 days) and quality of replies (acknowledgement of the help by stakeholders).

A second indicator (FF.COM.2) measures the adequacy of response to requests in terms of 1) content and 2) timely delivery. The JRC established its activity of food contact in direct support to DG SANTE in 1995. It responds to any ad-hoc request of DG SANTE E6 in its field in its capacity of support to EU policies of long standing expertise. JRC attends DG SANTE FCM working group meetings with Member States. It provides contributions where needed on either planned or ad-hoc basis. It also contributes to data and tools for EFSA where indicated in absence of conflict with its distribution of competences prioritising the service to DG SANTE. Currently the JRC drafts two technical guidelines in support of the Regulation on plastics (EU) No 10/2011 (migration testing and migration modelling). It also operated in supporting work to the follow up of a road map for non-harmonised materials.

Outputs

A final indicator is used for publications in peer-reviewed journals and invitations as speaker to scientific conference, or presentations or posters/papers presented at conferences. The expected ex-ante was 1 publication in peer review journal; 3 presentation or posters/papers at conferences and 1 invitation as speaker and/or chairperson. The ex-post were 1

publication in peer review journal; 14 invited keynote or oral presentations as speaker at conferences and 1 invitation as chairperson. These are summarised below.

Peer reviewed reports and publications

Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - Part 1: Release of Metals from Ceramic Articles, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine, (EUR number in process of assignment)

Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - Part 2: Release of Metals from Crystal Glass Articles, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine (EUR number in process of assignment)

Study on the Release of Metals from Ceramics and Glass/Crystalware in Support of the Revision of Ceramic Directive 84/500/EEC - Part 3: Release of Metals from the Lip Rim Area of External Decorated Articles, Peltzer Mercedes, Beldì Giorgia, Jakubowska Natalia, Simoneau Catherine (EUR number in process of assignment)

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials. ILC01-2014 – Follow-up ILC01-2013 on Proficiency Testing on Food Simulant E containing a cocktail of potential migrant substances, Silva Félix Juliana, Simoneau Catherine (EUR number in process of assignment)

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials - ILC 02 2014 – Identifying the composition of multilayer plastic packaging films, Mieth Anja, Catherine Simoneau (EUR number in process of assignment)

Report of an Inter-laboratory Comparison from the European Union Reference Laboratory for Food Contact Materials - ILC 03 2014 – Elements from Food Contact Materials; Part 1: Plastic // Part 2: Ceramic, Beldì Giorgia, Peltzer Mercedes, Simoneau Catherine, (EUR number in process of assignment)

Critical aspects in the determination of the surface in contact with foods for migration testing of kitchen utensils: Results from two investigations by interlaboratory comparisons organised by the European Reference Laboratory for food contact materials Mieth Anja; Hoekstra Eddo; Simoneau Catherine; JRC93296, 2014 EUR 27007 EN, ISSN 1831-9424, ISBN 978-92-79-44674-0, LB-NA-27007-EN-N, DOI 10.2788/039475, Publications Office of the European Union, Luxembourg.

Availability of methods for the analysis of substances regulated under Regulation (EU) No 10/2011, Simoneau Catherine; Alberto Lopes Joao; JRC93876 (technical report)

Annual Activity Report 2013: European Union Reference Laboratory for Food Contact Materials, Simoneau Catherine; JRC90583, 2014 EUR 26668, ISSN 1831-1792, ISBN 978-92-79-38469-1, LB-NA-26668-EN-N, DOI 10.2788/8391, Publications Office of the European Union, Luxembourg.

Training on Food Contact Materials in the frame of the EU-China Trade Project to Chinese delegation on Study Assignment on Food Contact Materials, Simoneau Catherine; Hoekstra Eddo; JRC91841

Training workshop "Safety of food contact materials: Technical Guidelines for Testing Migration under Regulation EU No 10/2011", Hoekstra Eddo; Hannaert Philippe; Bradley Emma; BRANDSCH Rainer; Bustos Juana; Dainelli Dario; Faust Birgit; Franz Roland; Kappenstein Oliver; Rijk Rinus; Simoneau Catherine; Vints Mark; JRC93653, 2014, EUR 27055, ISSN 1831-9424, ISBN 978-92-79-45030-3, LB-NA-27055-EN-N, DOI 10.2788/377927, Publications Office of the European Union, Luxembourg.

Training workshop "Safety of food contact materials: exposure assessment of chemicals in foods and the use of FACET for exposure assessment" 2014, KELLY Seamus, CONNOLLY Aileen, JRC93322, EUR 27020, Simoneau Catherine, Hannaert Philippe (eds), ISSN 1831-9424, ISBN 978-92-79-44703-7, LB-NA-27020-EN-N, DOI 10.2788/489333, Publications Office of the European Union, Luxembourg.

Report of the 21st plenary workshop of the European Union Reference Laboratory for Food Contact Materials: Ispra, 4-5 June 2014, Simoneau Catherine; Bradley Emma; Raffael Barbara; Silva Felix Juliana; Mieth Anja; Beldi Giorgia; Peltzer Mercedes Ana; Hoekstra Eddo; Milana Maria Rosaria; Sauvegrain Patrick; Raffael Barbara; Van Hoeck Els; Kappenstein Oliver. JRC91835, Ares(2014)1541586.

Proceedings of the 22nd plenary workshop of the European Union Reference Laboratory for Food Contact Materials - Ispra, 9 October 2014 Simoneau Catherine; Silva Felix Juliana; Mieth Anja; Beldi Giorgia; Peltzer Mercedes Ana; Hoekstra Eddo; Hannaert Philippe; Alberto Lopes Joao; Biedermann Maurus; Simoneau Catherine; Bradley Emma; JRC93316, Ref. Ares(2014)388767 - 17/02/2014

Optimisation of a novel analytical method and results from the interlaboratory comparison of the determination of BHT, BP, DiBP, DEHA and DINCH in new food simulant E, (poly (2,6-diphenyl phenylene oxide, PPPO)- Food Additives and Contaminants - Part A Chemistry, Analysis, Control, Exposure and Risk Assessment (2014, 01/2014; DOI:10.1080/19440049.2013.874046

Pilot testing methodologies for novel materials: Investigations on migration from silicone materials using 1H-NMR, Mieth Anja; Simoneau Catherine; JRC93887 (technical report)

European Union Reference Laboratory for Food Contact Materials: Work programme 2015, Simoneau Catherine JRC91833 (technical publication)

Oral presentations to international events and conferences

End of year reporting on JRC EURL work on ceramics and domestic glass/crystalware in support to a revision of the Ceramic Directive 84/500/EEC, Simoneau Catherine; Peltzer Mercedes Ana; JAKUBOWSKA Natalia; Beldi Giorgia; JRC91839 oral presentation, DG SANCO Working Party with Member States on Food Contact Materials, 01-02.12.2014, Brussels, Belgium. JRC91839.

Update on the development of testing methodologies applicable to Domestic Glass/Crystal , Simoneau Catherine; Peltzer Mercedes Ana; Beldi Giorgia; XXIV Technical exchange conference of the European Domestic Glass Committee and the International Crystal Federation, Simoneau Catherine; 29-30.09.2014, Kosta Boda, Sweden, JRC91840

Non intentionally added substances (NIAS): the challenges they pose (and how FACET could help). International conference: food contact materials-global compliance. Simoneau Catherine; 15-16.10.2014, Nice, Intertek. JRC91840.

2014 Briefing for Ceramics stakeholders on JRC EURL work on ceramics and crystalware in support to a revision of the Ceramic Directive 84/500/EEC, Simoneau Catherine; Peltzer Mercedes Ana; JAKUBOWSKA Natalia; Beldi Giorgia; JRC93257.

Science behind the safety and innovation for plastics, Simoneau Catherine, International Conference "Science Driven Consumer Protection: how Plastics Deliver". Plastics Europe, 20-21.10.2014, Berlin, Germany, JRC92976

Enlargement & Integration Training on Migration Testing in the framework of Regulation (EU) No 10/2011, 2014 08.10.2014, JRC JRC94034

Le attività del Laboratorio di Riferimento Europeo per i materiali a contatto alimentare [Activities of the European Reference Laboratory for Food Contact Materials] Beldi Giorgia; JRC90586

Ba, Co, Cu, Mn, Ni, Se in Ceramics: approaches used for risk assessment , Simoneau Catherine; Peltzer Mercedes Ana; Beldi Giorgia, EFSA Scientific network for risk assessment of regulated food ingredients and food packaging "FIP Network" Subgroup on food contact materials: Risk assessment activities, approaches and challenges related to non-plastics, EFSA, 12-14.11.2014, Parma, Italy. JRC92977

Interlaboratory comparisons of the European Union Reference Laboratory on protocols for surface area measurements and their impact on migration measurements for kitchen articles, Mieth Anja; Hoekstra Eddo; Simoneau Catherine; International conference. Metals and Alloys in Contact with Food: How to establish

compliance with European regulations and recommendations, Council of Europe, 06-07/2011, Ljubljana, Slovenia, JRC91838

Regulation of transport phenomena in EU food contact legislation, Hoekstra Eddo; International conference Condensed Matter 2014, session Transport phenomena impacting the safety and lifetime of materials, 24-29.08.2014, Paris, France, JRC90565

Technical guidelines for compliance testing for Regulation 10/2011, Hoekstra Eddo; International Conference Food Contact Compliance, Istituto Imballagio, 24-26.09.2014, Baveno, JRC91853

Technical guidelines for migration testing, Hoekstra Eddo; 2014, 22. Vortragsveranstaltung des VfV, 08.04.2014, Aschaffenburg (DE), JRC91856

What's in your plate? The science behind innovation and safety of Food Contact Materials, Simoneau Catherine; JRC90591, JRC lunchtime science lecture, 08.05.2014, Brussels, Belgium

Review of migration of nanomaterials from food contact materials, Hoekstra Eddo; ; International conference Condensed Matter 2014, session Transport phenomena impacting the safety and lifetime of materials, 24-29.08.2014, Paris, France, JRC90570

Eco-sustainable plastic food contact materials using nanomaterials - from development to final product Hoekstra Eddo; Int. Conf. Eco-sustainable Food Packaging Based on Polymer Nanomaterials, Cost Action FA0904, 26-28.02.2014, Rome, JRC88596

Other

Solid-phase microextraction/gas chromatography–mass spectrometry method optimization for characterization of surface adsorption forces of nanoparticles Enisa Omanovic-Miklicanin, Sandro Valzacchi, Catherine Simoneau, Douglas Gilliland & Francois Rossi, Analytical and Bioanalytical Chemistry ISSN 1618-2642 Volume 406 Number 26 Anal Bioanal Chem (2014) 406:6629-6636, DOI 10.1007/s00216-014-8078-z

Solubility of Polyvinyl Alcohol in Ethanol. João F. A. Lopes and Catherine Simoneau, EFSA supporting publication 2014:EN-660, 20 pp.

Annexes

Annex 1: database of methods and substances

See stand alone file:

FCM _EU_No_10_2011 _Substances &_methods_JAL_PH_FINAL_VERSION3

Annex 2: substances regulated in Regulation (EU) 10/2011 and that are not available from any accessible source.

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00001	12310	0266309-43-7	albumin	0	Missing
00002	12340		albumin, coagulated by formaldehyde	0	Missing
00003	12375		alcohols, aliphatic, monohydric, saturated, linear, primary (C_4-C_{22})	M038	BCR-BfR
00004	22332		mixture of (40 % w/w) 2,2,4-trimethylhexane-1,6-diisocyanate and (60 % w/w) 2,4,4-trimethylhexane-1,6-diisocyanate	0	Missing
00005	25360		trialkyl(C_5-C_{15})acetic acid, 2,3-epoxypropyl ester	M138	BCR-BfR
00006	25380		trialkyl acetic acid (C_7-C_{17}), vinyl esters	0	Missing
00007	30370		acetylacetic acid, salts	0	Missing
00008	30401		acetylated mono- and diglycerides of fatty acids	0	Missing
00009	30610		acids, C_2-C_{24}, aliphatic, linear, monocarboxylic from natural oils and fats, and their mono-, di- and triglycerol esters (branched fatty acids at naturally occuring levels are included)	0	Missing
00010	30612		acids, C_2-C_{24}, aliphatic, linear, monocarboxylic, synthetic and their mono-, di- and triglycerol esters	0	Missing
00011	30960		acids, aliphatic, monocarboxylic (C_6-C_{22}), esters with polyglycerol	0	Missing
00012	31328		acids, fatty, from animal or vegetable food fats and oils	0	Missing
00013	33120		alcohols, aliphatic, monohydric, saturated, linear, primary (C_4-C_{24})	0	Missing
00014	33801		n-alkyl(C_{10}-C_{13})benzenesulphonic acid	0	Missing
00015	34130		alkyl, linear with even number of carbon atoms (C_{12}-C_{20}) dimethylamines	0	Missing
00016	34230		alkyl(C_8-C_{22})sulphonic acids	0	Missing
00017	34281		alkyl(C_8-C_{22})sulphuric acids, linear, primary with an even number of carbon atoms	0	Missing
00018	34475		aluminium calcium hydroxide phosphite, hydrate	0	Missing
00020	39120		N,N-bis(2-hydroxyethyl)alkyl(C_8-C_{18})amine hydrochlorides	0	Missing
00021	42500		carbonic acid, salts	0	Missing
00022	43200		castor oil, mono- and diglycerides	0	Missing
00023	43515		chlorides of choline esters of coconut oil fatty acids	0	Missing
00024	45280		cotton fibers	0	Missing
00025	45440		cresols, butylated, styrenated	0	Missing
00026	46700		5,7-di-tert-butyl-3-(3,4- and 2,3-dimethylphenyl)-3H-benzofuran-2-one containing: a) 5,7-di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one (80 to 100 % w/w) and b) 5,7-di-tert-butyl-3-(2,3-dimethylphenyl)-3H-benzofuran-2-one (0 to 20 % w/w)	0	Missing
00028	50160		di-n-octyltin bis(n-alkyl(C_{10}-C_{16}) mercaptoacetate)	0	Missing
00029	50360		di-n-octyltin bis(ethyl maleate)	0	Missing
00030	50560		di-n-octyltin 1,4-butanediol bis(mercaptoacetate)	0	Missing
00031	50800		di-n-octyltin dimaleate, esterified	0	Missing
00032	50880		di-n-octyltin dimaleate, polymers (n = 2-4)	0	Missing
00033	51120		di-n-octyltin thiobenzoate 2-ethylhexyl mercaptoacetate	0	Missing
00034	54270		ethylhydroxymethylcellulose	0	Missing
00035	54280		ethylhydroxypropylcellulose	0	Missing
00036	54450		fats and oils, from animal or vegetable food sources	0	Missing
00037	54480		fats and oils, hydrogenated, from animal or vegetable food sources	0	Missing
00038	55520		glass fibers	0	Missing
00039	55600		glass microballs	0	Missing
00040	56360		glycerol, esters with acetic acid	0	Missing
00041	56486		glycerol, esters with acids, aliphatic, saturated, linear, with an even number of carbon atoms (C_{14}-C_{18}) and with acids, aliphatic, unsaturated, linear, with an even number of carbon atoms (C_{16}-C_{18})	0	Missing
00042	56487		glycerol, esters with butyric acid	0	Missing
00043	56490		glycerol, esters with erucic acid	0	Missing
00044	56495		glycerol, esters with 12-hydroxystearic acid	0	Missing
00045	56500		glycerol, esters with lauric acid	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00046	56510		glycerol, esters with linoleic acid	0	Missing
00047	56520		glycerol, esters with myristic acid	0	Missing
00048	56535		glycerol, esters with nonanoic acid	0	Missing
00049	56540		glycerol, esters with oleic acid	0	Missing
00050	56550		glycerol, esters with palmitic acid	0	Missing
00051	56570		glycerol, esters with propionic acid	0	Missing
00052	56580		glycerol, esters with ricinoleic acid	0	Missing
00053	56585		glycerol, esters with stearic acid	0	Missing
00054	57040		glycerol monooleate, ester with ascorbic acid	0	Missing
00055	57120		glycerol monooleate, ester with citric acid	0	Missing
00056	57200		glycerol monopalmitate, ester with ascorbic acid	0	Missing
00057	57280		glycerol monopalmitate, ester with citric acid	0	Missing
00058	57600		glycerol monostearate, ester with ascorbic acid	0	Missing
00059	57680		glycerol monostearate, ester with citric acid	0	Missing
00060	58300		glycine, salts	0	Missing
00061	60025		hydrogenated homopolymers and/or copolymers made of 1-decene and/or 1-dodecene and/or 1-octene	0	Missing
00062	64500		lysine, salts	0	Missing
00063	65440		manganese pyrophosphite	0	Missing
00064	66695		methylhydroxymethylcellulose	0	Missing
00065	67155		mixture of 4-(2-benzoxazolyl)-4'-(5-methyl-2-benzoxazolyl)stilbene, 4,4'-bis(2-benzoxazolyl) stilbene and 4,4'-bis(5-methyl-2-benzoxazolyl)stilbene	0	Missing
00066	67600		mono-n-octyltin tris(alkyl(C_{10}-C_{16}) mercaptoacetate)	0	Missing
00067	67840		montanic acids and/or their esters with ethyleneglycol and/or with 1,3-butanediol and/or with glycerol	0	Missing
00068	73160		phosphoric acid, mono- and di-n-alkyl (C_{16} and C_{18}) esters	0	Missing
00069	74400		phosphorous acid, tris(nonyl-and/or dinonylphenyl) ester	0	Missing
00070	76463		polyacrylic acid, salts	0	Missing
00071	76730		polydimethylsiloxane, γ-hydroxypropylated	0	Missing
00072	76815		polyester of adipic acid with glycerol or pentaerythritol, esters with even numbered, unbranched C_{12}-C_{22} fatty acids	0	Missing
00073	76866		polyesters of 1,2-propanediol and/or 1,3- and/or 1,4-butanediol and/or polypropyleneglycol with adipic acid, which may be end-capped with acetic acid or fatty acids C_{12}-C_{18} or n-octanol and/or n-decanol	0	Missing
00074	77440		polyethyleneglycol diricinoleate	0	Missing
00075	77702		polyethyleneglycol esters of aliph. monocarb. acids (C_6-C_{22}) and their ammonium and sodium sulphates	0	Missing
00076	77732		polyethylene glycol (EO=1-30, typically 5) ether of butyl 2-cyano 3-(4-hydroxy-3-methoxyphenyl) acrylate	0	Missing
00077	77733		polyethyleneglycol (EO=1-30, typically 5) ether of butyl-2-cyano-3-(4-hydroxyphenyl) acrylate	0	Missing
00078	77897		polyethyleneglycol (EO =1-50) monoalkylether (linear and branched, C_8-C_{20}) sulphate, salts	0	Missing
00079	80640		polyoxyalkyl (C_2-C_4) dimethylpolysiloxane	0	Missing
00080	81760		powders, flakes and fibres of brass, bronze, copper, stainless steel, tin, iron and alloys of copper, tin and iron	0	Missing
00081	83320		propylhydroxyethylcellulose	0	Missing
00082	83325		propylhydroxymethylcellulose	0	Missing
00083	83330		propylhydroxypropylcellulose	0	Missing
00084	85601		silicates, natural (with the exception of asbestos)	0	Missing
00085	85610		silicates, natural, silanated (with the exception of asbestos)	0	Missing
00086	86000		silicic acid, silylated	0	Missing
00087	86285		silicon dioxide, silanated	0	Missing
00088	86880		sodium monoalkyl dialkylphenoxybenzenedisulphonate	0	Missing
00089	89440		stearic acid, esters with ethyleneglycol	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00090	92195		taurine, salts	0	Missing
00091	92320		tetradecyl-polyethyleneglycol (EO = 3-8) ether of glycolic acid	0	Missing
00093	95858		waxes, paraffinic, refined, derived from petroleum based or synthetic hydrocarbon feedstocks, low viscosity	0	Missing
00094	95859		waxes, refined, derived from petroleum based or synthetic hydrocarbon feedstocks, high viscosity	0	Missing
00095	95883		white mineral oils, paraffinic, derived from petroleum based hydrocarbon feedstocks	0	Missing
00096	95920		wood flour and fibers, untreated	0	Missing
00105	22780 - 70400	0000057-10-3	palmitic acid	M083	BCR-BfR
00112	64015	0000060-33-3	linoleic acid	0	Missing
00113	16780 - 52800	0000064-17-5	ethanol	M111	BCR-BfR
00115	10090 - 30000	0000064-19-7	acetic acid	M098	BCR-BfR
00117	21550	0000067-56-1	methanol	M123	BCR-BfR
00118	23830 - 81882	0000067-63-0	2-propanol	M058	BCR-BfR
00119	30295	0000067-64-1	acetone	0	Missing
00122	23800	0000071-23-8	1-propanol	M057	BCR-BfR
00124	22870	0000071-41-0	1-pentanol	M051	BCR-BfR
00125	16950	0000074-85-1	ethylene	toxic gas	Missing
00126	10210	0000074-86-2	acetylene	toxic gas	Missing
00127	26050	0000075-01-4	vinyl chloride	M114	BCR-BfR
00128	10060	0000075-07-0	acetaldehyde	M100	BCR-BfR
00129	17020	0000075-21-8	ethylene oxide	M113	BCR-BfR
00130	26110	0000075-35-4	vinylidene chloride	M118	BCR-BfR
00131	48460	0000075-37-6	1,1-difluoroethane	0	Missing
00132	26140	0000075-38-7	vinylidene fluoride	toxic gas	Missing
00133	14380 - 23155	0000075-44-5	carbonyl chloride	M112	BCR-BfR
00134	43680	0000075-45-6	chlorodifluoromethane	0	Missing
00135	24010	0000075-56-9	propylene oxide	M116	BCR-BfR
00139	14680 - 44160	0000077-92-9	citric acid	M063	BCR-BfR
00140	44640	0000077-93-0	citric acid, triethyl ester	A098	BCR-BfR
00141	13380 - 25600 - 94960	0000077-99-6	1,1,1-trimethylolpropane	A060	BCR-BfR
00143	62450	0000078-78-4	isopentane	0	Missing
00144	19243 - 21640	0000078-79-5	2-methyl-1,3-butadiene	0	Missing
00145	10630	0000079-06-1	acrylamide	M121	BCR-BfR
00146	23890 - 82000	0000079-09-4	propionic acid	M070	BCR-BfR
00147	10690	0000079-10-7	acrylic acid	M097	BCR-BfR
00148	14650	0000079-38-9	chlorotrifluoroethylene	0	Missing
00150	20020	0000079-41-4	methacrylic acid	M062	BCR-BfR
00154	13617 - 16090	0000080-09-1	4,4'-dihydroxydiphenyl sulphone	M139	BCR-BfR
00156	21130	0000080-62-6	methacrylic acid, methyl ester	M034	BCR-BfR
00157	74880	0000084-74-2	phthalic acid, dibutyl ester	A106	BCR-BfR
00158	23380 - 76320	0000085-44-9	phthalic anhydride	M054	BCR-BfR
00159	74560	0000085-68-7	phthalic acid, benzyl butyl ester	A013	BCR-BfR
00160	84800	0000087-18-3	salicylic acid, 4-tert-butylphenyl ester	0	Missing
00162	65520	0000087-78-5	mannitol	0	Missing
00167	25240	0000091-08-7	2,6-toluene diisocyanate	M074	BCR-BfR
00170	16000	0000092-88-6	4,4'-dihydroxybiphenyl	M028	BCR-BfR

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00178	92800	0000096-69-5	4,4'-thiobis(6-tert-butyl-3-methylphenol)	A052	BCR-BfR
00193	24610	0000100-42-5	styrene	M033	BCR-BfR
00213	82400	0000105-62-4	1,2-propyleneglycol dioleate	0	Missing
00216	14770	0000106-44-5	*p-cresol*	M008	BCR-BfR
00221	40570	0000106-97-8	butane	gas	BCR-BfR
00222	13870	0000106-98-9	1-butene	gas	BCR-BfR
00223	13630	0000106-99-0	butadiene	M117	BCR-BfR
00224	13900	0000107-01-7	2-butene	gas	BCR-BfR
00226	15272 - 16960	0000107-15-3	ethylenediamine	M119	BCR-BfR
00234	19960	0000108-31-6	maleic anhydride	M021	BCR-BfR
00248	19540 - 64800	0000110-16-7	maleic acid	M048	BCR-BfR
00250	53520	0000110-30-5	N,N'-ethylenebisstearamide	A089	BCR-BfR
00251	53360	0000110-31-6	N,N'-ethylenebisoleamide	0	Missing
00258	70480	0000111-06-8	palmitic acid, butyl ester	0	Missing
00275	23980	0000115-07-1	propylene	0	Missing
00276	19000	0000115-11-7	isobutene	0	Missing
00281	25120	0000116-14-3	tetrafluoroethylene	0	Missing
00282	18430	0000116-15-4	hexafluoropropylene	0	Missing
00306	88960	0000124-26-5	stearamide	A050	BCR-BfR
00307	42160	0000124-38-9	carbon dioxide	toxic gas	Missing
00312	21490	0000126-98-7	methacrylonitrile	M086	BCR-BfR
00324	83700	0000141-22-0	ricinoleic acid	0	Missing
00329	59360	0000142-62-1	hexanoic acid	0	Missing
00334	17005	0000151-56-4	ethyleneimine	0	Missing
00344	13810 - 21821	0000505-65-7	1,4-butanediol formal	M155	BCR-BfR
00362	14350	0000630-08-0	carbon monoxide	toxic gas	Missing
00365	11680	0000689-12-3	acrylic acid, isopropyl ester	0	Missing
00371	11510 - 11830	0000818-61-1	acrylic acid, monoester with ethyleneglycol	M035	BCR-BfR
00378	21970	0000923-02-4	N-methylolmethacrylamide	0	Missing
00380	11980	0000925-60-0	acrylic acid, propyl ester	0	Missing
00384	40000	0000991-84-4	2,4-bis(octylmercapto)-6-(4-hydroxy-3,5-di-tert-butylanilino)-1,3,5-triazine	A065	BCR-BfR
00408	82960	0001330-80-9	1,2-propyleneglycol monooleate	0	Missing
00409	62240	0001332-37-2	iron oxide	0	Missing
00412	45200	0001335-23-5	copper iodide	0	Missing
00423	22937	0001623-05-8	perfluoropropylperfluorovinyl ether	M149	BCR-BfR
00430	95600	0001843-03-4	1,1,3-tris(2-methyl-4-hydroxy-5-tert-butylphenyl) butane	0	Missing
00432	12280	0002035-75-8	adipic anhydride	0	Missing
00435	14230	0002123-24-2	caprolactam, sodium salt	0	Missing
00438	13303 - 38875	0002162-74-5	bis(2,6-diisopropylphenyl) carbodiimide	0	Missing
00446	10750	0002495-35-4	acrylic acid, benzyl ester	0	Missing
00448	11890	0002499-59-4	acrylic acid, n-octyl ester	0	Missing
00450	24430	0002561-88-8	sebacic anhydride	0	Missing
00456	10810	0002998-08-5	acrylic acid, sec-butyl ester	0	Missing
00459	46870	0003135-18-0	3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid, dioctadecyl ester	0	Missing
00461	22420	0003173-72-6	1,5-naphthalene diisocyanate	M130	BCR-BfR
00464	61280	0003293-97-8	2-hydroxy-4-n-hexyloxybenzophenone	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00465	68040	0003333-62-8	7-[2H-naphtho-(1,2-D)triazol-2-yl]-3-phenylcoumarin	0	Missing
00466	50640	0003648-18-8	di-n-octyltin dilaurate	0	Missing
00467	14800 - 45600	0003724-65-0	crotonic acid	0	Missing
00472	66560	0004066-02-8	2,2'-methylenebis(4-methyl-6-cyclohexylphenol)	A070	BCR-BfR
00473	12265	0004074-90-2	adipic acid, divinyl ester	0	Missing
00474	43600	0004080-31-3	1-(3-chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride	0	Missing
00477	46720	0004130-42-1	2,6-di-tert-butyl-4-ethylphenol	0	Missing
00478	60180	0004191-73-5	4-hydroxybenzoic acid, isopropyl ester	0	Missing
00479	12970	0004196-95-6	azelaic anhydride	0	Missing
00480	46790	0004221-80-1	3,5-di-tert-butyl-4-hydroxybenzoic acid, 2,4-di-tert-butylphenyl ester	0	Missing
00482	21100	0004655-34-9	methacrylic acid, isopropyl ester	0	Missing
00486	54005	0005136-44-7	ethylene-N-palmitamide-N'-stearamide	0	Missing
00488	53440	0005518-18-3	N,N'-ethylenebispalmitamide	0	Missing
00489	41040	0005743-36-2	calcium butyrate	0	Missing
00490	16600	0005873-54-1	diphenylmethane-2,4'-diisocyanate	M126	BCR-BfR
00491	82720	0006182-11-2	1,2-propyleneglycol distearate	0	Missing
00493	39200	0006200-40-4	bis(2-hydroxyethyl)-2-hydroxypropyl-3-(dodecyloxy)methylammonium chloride	0	Missing
00501	34480		aluminium fibers, flakes and powders	0	Missing
00502	22778	0007456-68-0	4,4'-oxybis(benzenesulphonyl azide)	0	Missing
00510	12789 - 35320	0007664-41-7	ammonia	toxic gas	Missing
00518	35845	0007771-44-0	arachidonic acid	0	Missing
00521	58320	0007782-42-5	graphite	toxic gas	Missing
00522	14530	0007782-50-5	chlorine	toxic gas	Missing
00525	62640	0008001-39-6	japan wax	0	Missing
00526	43440	0008001-75-0	ceresin	0	Missing
00528	63760	0008002-43-5	lecithin	0	Missing
00529	67850	0008002-53-7	montan wax	0	Missing
00530	41760	0008006-44-8	candelilla wax	0	Missing
00536	84320	0008050-15-5	rosin, hydrogenated, ester with methanol	0	Missing
00537	84080	0008050-26-8	rosin, ester with pentaerythritol	0	Missing
00538	84000	0008050-31-5	rosin, ester with glycerol	0	Missing
00539	24160	0008052-10-6	rosin tall oil	M012	BCR-BfR
00542	42640	0009000-11-7	carboxymethylcellulose	0	Missing
00543	45920	0009000-16-2	dammar	0	Missing
00553	14500 - 43280	0009004-34-6	cellulose	M044	BCR-BfR
00556	54260	0009004-58-4	ethylhydroxyethylcellulose	0	Missing
00557	66640	0009004-59-5	methylethylcellulose	0	Missing
00563	78320	0009004-97-1	polyethyleneglycol monoricinoleate	0	Missing
00567	82080	0009005-37-2	1,2-propyleneglycol alginate	0	Missing
00574	24250 - 84560	0009006-04-6	rubber, natural	0	Missing
00579	61800	0009049-76-7	hydroxypropyl starch	0	Missing
00582	50240	0010039-33-5	di-n-octyltin bis(2-ethylhexyl maleate)	0	Missing
00586	65280	0010043-84-2	manganese hypophosphite	0	Missing
00587	68400	0010094-45-8	octadecylerucamide	0	Missing
00589	52645	0010436-08-5	cis-11-eicosenamide	0	Missing
00590	21370	0010595-80-9	methacrylic acid, 2-sulphoethyl ester	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00591	36160	0010605-09-1	ascorbyl stearate	0	Missing
00593	44960	0011104-61-3	cobalt oxide	0	Missing
00594	65360	0011129-60-5	manganese oxide	0	Missing
00595	19510	0011132-73-3	lignocellulose	0	Missing
00597	67120	0012001-26-2	mica	0	Missing
00598	41600	0037293-22-4 / 0012004-14-7	calcium sulphoaluminate	0	Missing
00599	36840	0012007-55-5	barium tetraborate	0	Missing
00600	60030	0012072-90-1	hydromagnesite	0	Missing
00601	35440	0012124-97-9	ammonium bromide	0	Missing
00602	70240	0012198-93-5	ozokerite	0	Missing
00603	83460	0012269-78-2	pyrophyllite	0	Missing
00604	60080	0012304-65-3	hydrotalcite	0	Missing
00605	11005	0012542-30-2	acrylic acid, dicyclopentenyl ester	0	Missing
00606	65200	0012626-88-9	manganese hydroxide	0	Missing
00608	40800	0013003-12-8	4,4'-butylidene-bis(6-tert-butyl-3-methylphenyl-ditridecyl phosphite)	0	Missing
00609	83455	0013445-56-2	pyrophosphorous acid	0	Missing
00611	35120	0013560-49-1	3-aminocrotonic acid, diester with thiobis (2-hydroxyethyl) ether	0	Missing
00612	16694	0013811-50-2	N,N'-divinyl-2-imidazolidinone	0	Missing
00613	95905	0013983-17-0	wollastonite	0	Missing
00614	45560	0014464-46-1	cristobalite	0	Missing
00618	51040	0015535-79-2	di-n-octyltin mercaptoacetate	0	Missing
00619	50320	0015571-58-1	di-n-octyltin bis(2-ethylhexyl mercaptoacetate)	A095 - A099	BCR-BfR
00620	50720	0015571-60-5	di-n-octyltin dimaleate	0	Missing
00622	69840	0016260-09-6	oleylpalmitamide	0	Missing
00623	52640	0016389-88-1	dolomite	0	Missing
00626	57800	0018641-57-1	glycerol tribehenate	0	Missing
00627	59760	0019569-21-2	huntite	0	Missing
00628	96190	0020427-58-1	zinc hydroxide	0	Missing
00630	82240	0022788-19-8	1,2-propyleneglycol dilaurate	0	Missing
00631	59120	0023128-74-7	1,6-hexamethylene-bis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionamide)	A064	BCR-BfR
00632	52880	0023676-09-7	4-ethoxybenzoic acid, ethyl ester	0	Missing
00633	53200	0023949-66-8	2-ethoxy-2'-ethyloxanilide	A081	BCR-BfR
00635	40720	0025013-16-5	tert-butyl-4-hydroxyanisole	A011	BCR-BfR
00636	31500	0025134-51-4	acrylic acid, acrylic acid, 2-ethylhexyl ester, copolymer	0	Missing
00637	71635	0025151-96-6	pentaerythritol dioleate	0	Missing
00640	54930	0025359-91-5	formaldehyde-1-naphthol, copolymer	0	Missing
00641	22331	0025513-64-8	mixture of (35-45 % w/w) 1,6-diamino-2,2,4-trimethylhexane and (55-65 % w/w)1,6-diamino-2,4,4-trimethylhexane	0	Missing
00645	67760	0026401-86-5	mono-n-octyltin tris(isooctyl mercaptoacetate)	A105	BCR-BfR
00646	50480	0026401-97-8	di-n-octyltin bis(isooctyl mercaptoacetate)	A096 - A100	BCR-BfR
00647	56720	0026402-23-3	glycerol monohexanoate	0	Missing
00648	56880	0026402-26-6	glycerol monooctanoate	0	Missing
00649	47210	0026427-07-6	dibutylthiostannoic acid polymer	0	Missing
00650	49600	0026636-01-1	dimethyltin bis(isooctyl mercaptoacetate)	0	Missing
00651	88240	0026658-19-5	sorbitan tristearate	0	Missing
00652	38820	0026741-53-7	bis(2,4-di-tert-butylphenyl) pentaerythritol diphosphite	A079	BCR-BfR
00653	25270	0026747-90-0	2,4-toluene diisocyanate dimer	M129	BCR-BfR

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00654	88600	0026836-47-5	sorbitol monostearate	0	Missing
00656	24760	0026914-43-2	styrenesuphonic acid	M136	BCR-BfR
00657	67680	0027107-89-7	mono-n-octyltin tris(2-ethylhexyl mercaptoacetate)	A104	BCR-BfR
00659	82800	0027194-74-7	1,2-propyleneglycol monolaurate	0	Missing
00660	47540	0027458-90-8	di-tert-dodecyl disulphide	0	Missing
00665	83120	0029013-28-3	1,2-propyleneglycol monopalmitate	0	Missing
00666	87280	0029116-98-1	sorbitan dioleate	0	Missing
00667	55190	0029204-02-2	gadoleic acid	0	Missing
00668	80240	0029894-35-7	polyglycerol ricinoleate	0	Missing
00669	56610	0030233-64-8	glycerol monobehenate	0	Missing
00670	56800	0030899-62-8	glycerol monolaurate diacetate	0	Missing
00672	76845	0031831-53-5	polyester of 1,4-butanediol with caprolactone	0	Missing
00673	53670	0032509-66-3	ethylene glycol bis[3,3-bis(3-tert-butyl-4-hydroxyphenyl)butyrate]	A007	BCR-BfR
00674	46480	0032647-67-9	dibenzylidene sorbitol	0	Missing
00675	38800	0032687-78-8	N,N'-bis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyl)hydrazide	A080	BCR-BfR
00676	50400	0033568-99-9	di-n-octyltin bis(isooctyl maleate)	0	Missing
00677	82560	0033587-20-1	1,2-propyleneglycol dipalmitate	0	Missing
00678	59200	0035074-77-2	1,6-hexamethylene-bis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)	A008	BCR-BfR
00680	94400	0036443-68-2	triethyleneglycol bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate]	A097	BCR-BfR
00682	53270	0037205-99-5	ethylcarboxymethylcellulose	0	Missing
00683	66200	0037206-01-2	methylcarboxymethylcellulose	0	Missing
00684	68125	0037244-96-5	nepheline syenite	0	Missing
00686	61390	0037353-59-6	hydroxymethylcellulose	0	Missing
00688	92560	0038613-77-3	tetrakis(2,4-di-tert-butyl-phenyl)-4,4'-biphenylylene diphosphonite	A046	BCR-BfR
00690	92880	0041484-35-9	thiodiethanol bis(3-(3,5-di-tert-butyl-4-hydroxy phenyl) propionate)	A084	BCR-BfR
00691	13600	0047465-97-4	3,3-bis(3-methyl-4-hydroxyphenyl)2-indolinone	M145	BCR-BfR
00692	52320	0052047-59-3	2-(4-dodecylphenyl)indole	0	Missing
00693	88160	0054140-20-4	sorbitan tripalmitate	0	Missing
00694	21400	0054276-35-6	methacrylic acid, sulphopropyl ester	0	Missing
00695	67520	0054849-38-6	monomethyltin tris(isooctyl mercaptoacetate)	0	Missing
00696	92205	0057569-40-1	terephthalic acid, diester with 2,2'-methylenebis(4-methyl-6-tert-butylphenol)	0	Missing
00697	67515	0057583-34-3	monomethyltin tris(ethylhexyl mercaptoacetate)	0	Missing
00698	49595	0057583-35-4	dimethyltin bis(ethylhexyl mercaptoacetate)	0	Missing
00699	90720	0058446-52-9	stearoylbenzoylmethane	A045	BCR-BfR
00700	31520	0061167-58-6	acrylic acid, 2-tert-butyl-6-(3-tert-butyl-2-hydroxy-5-methylbenzyl)-4-methylphenyl ester	A093	BCR-BfR
00701	40160	0061269-61-2	N,N'-bis(2,2,6,6-tetramethyl-4-piperidyl)hexamethylenediamine-1,2-dibromoethane, copolymer	0	Missing
00702	87920	0061752-68-9	sorbitan tetrastearate	0	Missing
00703	17170	0061788-47-4	fatty acids, coco	0	Missing
00704	77600	0061788-85-0	polyethyleneglycol ester of hydrogenated castor oil	0	Missing
00706	17230	0061790-12-3	fatty acids, tall oil	0	Missing
00708	77520	0061791-12-6	polyethyleneglycol ester of castor oil	0	Missing
00709	87520	0062568-11-0	sorbitan monobehenate	0	Missing
00710	38700	0063397-60-4	bis(2-carbobutoxyethyl)tin-bis(isooctyl mercaptoacetate)	0	Missing
00711	42000	0063438-80-2	(2-carbobutoxyethyl)tin-tris(isooctyl mercaptoacetate)	0	Missing
00712	42960	0064147-40-6	castor oil, dehydrated	0	Missing
00713	43480	0064365-11-3	charcoal, activated	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00714	84400	0064365-17-9	rosin, hydrogenated, ester with pentaerythritol	0	Missing
00715	46880	0065140-91-2	3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid, monoethyl ester, calcium salt	A015	BCR-BfR
00717	84210	0065997-06-0	rosin, hydrogenated	0	Missing
00718	84240	0065997-13-9	rosin, hydrogenated, ester with glycerol	0	Missing
00719	65920	0066822-60-4	N-methacryloyloxyethyl-N,N-dimethyl-N-carboxymethylammonium chloride, sodium salt -octadecyl methacrylate-ethyl methacrylate-cyclohexyl methacrylate-N-vinyl-2-pyrrolidone, copolymers	0	Missing
00720	67360	0067649-65-4	mono-n-dodecyltin tris(isooctyl mercaptoacetate)	0	Missing
00721	46800	0067845-93-6	3,5-di-tert-butyl-4-hydroxybenzoic acid, hexadecyl ester	0	Missing
00722	17200	0068308-53-2	fatty acids, soya	0	Missing
00723	88880	0068412-29-3	starch, hydrolysed	0	Missing
00725	77895	0068439-49-6	polyethyleneglycol (EO = 2-6) monoalkyl (C_{16}-C_{18}) ether	0	Missing
00726	83599	0068442-12-6	reaction products of oleic acid, 2-mercaptoethyl ester, with dichlorodimethyltin, sodium sulphide and trichloromethyltin	0	Missing
00727	43360	0068442-85-3	cellulose, regenerated	0	Missing
00728	75100	0028553-12-0 / 0068515-48-0	phthalic acid, diesters with primary, saturated C_8-C_{10} branched alcohols, more than 60 % C_9	A075	BCR-BfR
00729	75105	0026761-40-0 / 0068515-49-1	phthalic acid, diesters with primary, saturated C_9-C_{11} alcohols more than 90 % C_{10}	A025	BCR-BfR
00731	18220	0068564-88-5	N-heptylaminoundecanoic acid	0	Missing
00736	50960	0069226-44-4	di-n-octyltin ethyleneglycol bis(mercaptoacetate)	0	Missing
00737	77370	0070142-34-6	polyethyleneglycol-30 dipolyhydroxystearate	0	Missing
00739	70000	0070331-94-1	2,2'-oxamidobis[ethyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionate]	0	Missing
00741	24070 - 83610 - 83610	0073138-82-6	resin acids and rosin acids	M017	BCR-BfR
00742	92700	0078301-43-6	2,2,4,4-tetramethyl-20-(2,3-epoxypropyl)-7-oxa-3,20-diazadispiro-[5.1.11.2]-heneicosan-21-one, polymer	0	Missing
00743	38950	0079072-96-1	bis(4-ethylbenzylidene)sorbitol	A094	BCR-BfR
00745	68145	0080410-33-9	2,2',2'-nitrilo(triethyl tris(3,3',5,5'-tetra-tert-butyl-1,1'-bi-phenyl-2,2'-diyl)phosphite)	0	Missing
00746	38810	0080693-00-1	bis(2,6-di-tert-butyl-4-methylphenyl)pentaerythritol diphosphite	0	Missing
00747	47600	0084030-61-5	di-n-dodecyltin bis(isooctyl mercaptoacetate)	0	Missing
00749	66360	0085209-91-2	2,2'-methylene bis(4,6-di-tert-butylphenyl) sodium phosphate	0	Missing
00751	81515	0087189-25-1	poly(zinc glycerolate)	0	Missing
00752	39890	0081541-12-0 / 0054686-97-4 / 0069158-41-4 / 0087826-41-3	bis(methylbenzylidene)sorbitol	0	Missing
00753	62800	0092704-41-1	kaolin, calcined	0	Missing
00754	56020	0099880-64-5	glycerol dibehenate	0	Missing
00756	40020	0110553-27-0	2,4-bis(octylthiomethyl)-6-methylphenol	A082	BCR-BfR
00757	95725	0110638-71-6	vermiculite, reaction product with citric acid, lithium salt	0	Missing
00758	38940	0110675-26-8	2,4-bis(dodecylthiomethyl)-6-methylphenol	0	Missing
00759	54300	0118337-09-0	2,2'-ethylidenebis(4,6-di-tert-butylphenyl) fluorophosphonite	0	Missing
00760	83595	0119345-01-6	reaction product of di-tert-butylphosphonite with biphenyl, obtained by condensation of 2,4-di-tert-butylphenol with Friedel Craft reaction product of phosphorous trichloride and biphenyl	0	Missing
00761	92930	0120218-34-0	thiodiethanolbis(5-methoxycarbonyl-2,6-dimethyl-1,4-dihydropyridine-3-carboxylate)	0	Missing
00762	31530	0123968-25-2	acrylic acid, 2,4-di-tert-pentyl-6-(1-(3,5-di-tert-pentyl-2-hydroxyphenyl)ethyl)phenyl ester	0	Missing
00763	39925	0129228-21-3	3,3-bis(methoxymethyl)-2,5-dimethylhexane	0	Missing
00765	49485	0134701-20-5	2,4-dimethyl-6-(1-methylpentadecyl)phenol	0	Missing
00766	38879	0135861-56-2	bis(3,4-dimethylbenzylidene)sorbitol	0	Missing
00767	38510	0136504-96-6	1,2-bis(3-aminopropyl)ethylenediamine, polymer with N-butyl-2,2,6,6-tetramethyl-4-piperidinamine and 2,4,6-trichloro-1,3,5-triazine	0	Missing
00769	74010	0145650-60-8	phosphorous acid, bis(2,4-di-tert-butyl-6-methylphenyl) ethyl ester	0	Missing
00780	81220	0192268-64-7	poly-[[6-[N-(2,2,6,6-tetramethyl-4-piperidinyl)-n-butylamino]-1,3,5-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidinyl)imino]-1,6-	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
			hexanediyl[(2,2,6,6-tetramethyl-4-piperidinyl)imino]]-α-[N,N,N',N'-tetrabutyl-N"-(2,2,6,6-tetramethyl-4-piperidinyl)-N"-[6-(2,2,6,6-tetramethyl-4-piperidinylamino)-hexyl]-[1,3,5-triazine-2,4,6-triamine]-ω-N,N,N',N'-tetrabutyl-1,3,5-triazine-2,4-diamine]		
00783	55910	0736150-63-3	glycerides, castor-oil mono-, hydrogenated, acetates	0	Missing
00789	60027		hydrogenated homopolymers and/or copolymers made of 1-hexene and/or 1-octene and/or 1-decene and/or 1-dodecene and/or 1-tetradecene (Mw: 440-12 000)	0	Missing
00797	76807	0007328-26-5	polyester of adipic acid with 1,3-butanediol, 1,2-propanediol and 2-ethyl-1-hexanol	0	Missing
00799	77708		polyethyleneglycol (EO = 1-50) ethers of linear and branched primary (C_8-C_{22}) alcohols	0	Missing
00803	33535	0152261-33-1	α-alkenes(C_{20}-C_{24}) copolymer with maleic anhydride, reaction product with 4-amino-2,2,6,6-tetramethylpiperidine	0	Missing
00804	80510	1010121-89-7	poly(3-nonyl-1,1-dioxo-1-thiopropane-1,3-diyl)-block-poly(x-oleyl-7-hydroxy-1,5-diiminooctane-1,8-diyl), process mixture with x=1 and/or 5, neutralised with dodecylbenzenesulfonic acid	0	Missing
00805	93450		titanium dioxide, coated with a copolymer of n-octyltrichlorosilane and [aminotris(methylenephosphonic acid), penta sodium salt]	0	Missing
00809	49080	0852282-89-4	N-(2,6-diisopropylphenyl)-6-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-1H-benzo[de]isoquinolin-1,3(2H)-dione	0	Missing
00813	91530		sulphosuccinic acid alkyl (C_4-C_{20}) or cyclohexyl diesters, salts	0	Missing
00814	91815		sulphosuccinic acid monoalkyl (C_{10}-C_{16}) polyethyleneglycol esters, salts	0	Missing
00815	94985		trimethylolpropane, mixed triesters and diesters with benzoic acid and 2-ethylhexanoic acid	0	Missing
00816	45704		cis-1,2-cyclohexanedicarboxylic acid, salts	0	Missing
00817	38507		cis-endo-bicyclo[2.2.1]heptane-2,3-dicarboxylic acid, salts	0	Missing
00818	21530		methallylsulphonic acid, salts	0	Missing
00819	68110		neodecanoic acid, salts	0	Missing
00820	76420		pimelic acid, salts	0	Missing
00821	90810		stearoyl-2-lactylic acid, salts	0	Missing
00822	71938		perchloric acid, salts	0	Missing
00823	24889		5-Sulphoisophthalic acid, salts	0	Missing
00827	30080	0004180-12-5	acetic acid, copper salt	0	Missing
00828	30180	0002180-18-9	acetic acid, manganese salt	0	Missing
00830	38505	0351870-33-2	cis-endo-bicyclo[2.2.1]heptane-2,3-dicarboxylic acid, disodium salt	0	Missing
00831	40980	0019664-95-0	butyric acid, manganese salt	0	Missing
00832	42320	0007492-68-4	carbonic acid, copper salt	0	Missing
00833	42400	0010377-37-4	carbonic acid, lithium salt	0	Missing
00835	53610	0054453-03-1	ethylenediaminetetraacetic acid, copper salt	0	Missing
00837	63200	0051877-53-3	lactic acid, manganese salt	0	Missing
00838	67896	0020336-96-3	myristic acid, lithium salt	0	Missing
00839	68078	0027253-31-2	neodecanoic acid, cobalt salt	0	Missing
00840	69160	0014666-94-5	oleic acid, cobalt salt	0	Missing
00842	73040	0013763-32-1	phosphoric acid, lithium salts	0	Missing
00843	73120	0010124-54-6	phosphoric acid, manganese salt	0	Missing
00844	82020	0019019-51-3	propionic acid, cobalt salt	0	Missing
00845	85760	0012068-40-5	silicic acid, lithium aluminium salt(2:1:1)	0	Missing
00846	85840	0053320-86-8	silicic acid, lithium magnesium sodium salt	0	Missing
00847	85920	0012627-14-4	silicic acid, lithium salt	0	Missing
00848	89170	0013586-84-0	stearic acid, cobalt salt	0	Missing
00849	89200	0007617-31-4	stearic acid, copper salt	0	Missing
00850	90800	0005793-94-2	stearoyl-2-lactylic acid, calcium salt	0	Missing
00851	92000	0007727-43-7	sulphuric acid, barium salt	0	Missing
00852	92030	0010124-44-4	sulphuric acid, copper salt	0	Missing
00855	40560		(butadiene, styrene, methyl methacrylate) copolymer cross-linked with 1,3-butanediol dimethacrylate	0	Missing

FCM Substance No.	*Ref. No.*	*CAS No.*	*Substance name*	collection JRC BCR-BfR **(authorised)**	
00856	40563		(butadiene, styrene, methyl methacrylate, butyl acrylate) copolymer cross-linked with divinylbenzene or 1,3-butanediol dimethacrylate	0	Missing
00857	66765		(methyl methacrylate, butyl acrylate, styrene, glycidyl methacrylate) copolymer	0	Missing
00858	38565	0090498-90-1	3,9-bis[2-(3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy)-1,1-dimethylethyl]-2,4,8,10-tetraoxaspiro[5,5]undecane	0	Missing
00859	40515		(butadiene, ethyl acrylate, methyl methacrylate, styrene), copolymer crosslinked with divinylbenzene	0	Missing
00865	40619	0025322-99-0	(butyl acrylate, methyl methacrylate, butyl methacrylate) copolymer	0	Missing
00866	40620		(butyl acrylate, methyl methacrylate) copolymer, cross-linked with allyl methacrylate	0	Missing
00867	40815	0040471-03-2	(butyl methacrylate, ethyl acrylate, methyl methacrylate) copolymer	0	Missing
00869	66763	0027136-15-8	(butyl acrylate, methyl methacrylate, styrene) copolymer	0	Missing
00873	93460	xx	octyltriethoxysilane (OTES)-modified titanium dioxide	0	Missing
00878	31335		acids, fatty (C_8-C_{22}) from animal or vegetable fats and oils, esters with branched alcohols, aliphatic, monohydric, saturated, primary (C_3-C_{22})	0	Missing
00879	31336		acids, fatty (C_8-C_{22}) from animal or vegetable fats and oils, esters with alcohols, linear, aliphatic, monohydric, saturated, primary (C_1-C_{22})	0	Missing
00902		0000128-44-9	1,2-benzisothiazol-3(2H)-one 1,1 dioxide, sodium salt	0	Missing
00913	15370	0003236-53-1	1,6-diamino-2,2,4-trimethylhexane	0	Missing
00914	15400	0003236-54-2	1,6-diamino-2,4,4-trimethylhexane	0	Missing
00915	25573	0016938-22-0	2,2,4-trimethylhexane-1,6-diisocyanate	0	Missing
00916	25574	0015646-96-5	2,4,4-trimethylhexane-1,6-diisocyanate	0	Missing
00919	38320	0005242-49-9	4-(2-benzoxazolyl)-4'-(5-methyl-2-benzoxazolyl)stilbene	0	Missing
00924	94987		trimethylolpropane, mixed triester and diesters with n-octanoic and n-decanoic acid	0	Missing
00942	86432/20		silver containing glass (silver-magnesium-aluminium-phosphate-silicate), silver content less than 2%	0	Missing
00943	86432/40		silver containing glass (silver-magnesium-aluminium-sodium-phosphate-silicate-borate), silver content less than 0.5%	0	Missing
00944	86432/60		silver containing glass (silver-magnesium-sodium-phosphate), silver content less than 3 %	0	Missing
00945	86434		silver sodium hydrogen zirconium phosphate	0	Missing
00946	86437		silver zeolite A (silver zinc sodium ammonium alumino silicate), silver content 2 – 5 %	0	Missing
00947	86437/50		silver zinc glass	0	Missing
00948	86438	0130328-20-0	silver zinc zeolite	0	Missing
00949	86438/50		silver zinc zeolite A (silver-zinc sodium magnesium alumino silicate calcium phosphate), silver content 0.34 - 0.54 %	0	Missing
00950	93930	0003380-34-5	2,4,4'-tricholoro-2'-hydroxydiphenylether	0	Missing
00952	86430		silver chloride (20% w/w) coated onto titanium dioxide (80% w/w)	0	Missing
00953	86432		silver-containing glass (silver-magnesium-calcium-phosphate-borate)	0	Missing
00954	86432/10		silver in glass	0	Missing
00956	37530	0111337-53-2	1,2-benzisothiazol-3(2H)-one, lithium salt	0	Missing
00957	62210	0055406-53-6	3-iodo-2-propynyl butyl carbamate	0	Missing
00965	13453	0001333-16-0	bis(hydroxyphenyl)methane	0	Missing
00966	13455	0002467-02-9	2,2' bis(hydroxyphenyl)methane	0	Missing
00967	13456	0001333-03-0	2,4' bis(hydroxyphenyl)methane	0	Missing
00979	79987		(polyethylene terephthalate, hydroxylated polybutadiene, pyromellitic anhydride) copolymer	0	Missing

Annex 3 list NRLs

List of the National Reference Laboratories for Food Contact Materials		
Country	**NRL, name and address**	**name and e-mail of principle c**
AUSTRIA	Austrian Agency for Health and Food Safety (AGES), Institut für Lebensmittelsicherheit Wien, Spargelfeldstraße 191, 1220 Vienna, Austria	*Mr. Markus Polz*
BELGIUM	Institute of Public Health, ISSP-LP, Rue J. Wystman, 14, 1050 Bruxelles, Belgium	*Mr. Fabien Bolle, Mrs. Tina Ng Els Van Hoeck*
BULGARIA	National Center for Public Health Protection, 15, Akad. Ivan Geshov Blvd., 1431 Sofia, BULGARIA	*Mrs. Teri Vrabcheva*
REPUBLIC OF CYPRUS	Laboratory for Control of Food Contact Materials and Control of Toys, Ministry of Health, State General Laboratory (SGL), 44 Kimonos st, Acropolis, 1451 Nicosia, Cyprus	*Mrs. Evgenia Paraskeva Vatyli Mrs. Antigoni Achilleos*
CROATIA		
CZECH REPUBLIC	National Institute of Public Health, NRL for Food Contact Materials and for Articles for children under 3 years old, Šrobárova 48, 100 42 Praha 10, Czech Republic	*Mrs. Jitka Sosnovcová, Mr. Ka Vrbík*
DENMARK	Department of Food Chemistry, National Food Institute Technical University of Denmark, Mørkhøj Bygade 19, 2860 Søborg, Denmark	*Mr. Jens Højslev Petersen*
	Danish Veterinary and Food Administration Laboratory Århus, Sønderskovvej 5, 8520 Lystrup, Denmark	*Mrs. Bolette Okholm*
ESTONIA	Health Board - Central Laboratory of Chemistry, 2 Kotka street, 11315 Tallinn, Estonia	*Mrs. Jana Jõgi*
FINLAND	Finnish Customs Laboratory, Tekniikantie 13, 02150 Espoo Finland	*Mrs. Arja Meriläinen*
FRANCE	Testing Department- Laboratoire National d'Essais, 29, avenue Roger Hennequin, 78197 Trappes Cedex, France	*Mr. Patrick Sauvegrain*
	SCL Laboratoire de Bordeaux-Pessac, 3, Avenue du Docteur Albert Schweitzer, 33608 Pessac, France	*Mrs Isabelle Deyris*
GERMANY	Bundesinstitut für Risikobewertung (BFR) (Federal Institute for Risk Assessment), Max-Dohrn-Str. 8-10, 10589 Berlin, Germany	*Mr. Oliver Kappenstein*
GREECE	General Chemical State Laboratory, D' Chemical Service of Athens, Section, Laboratory of Articles and Materials in Contact with Foodstuffs, 16, An. Tsocha st, 115 21 Athens, Greece	*Mrs. Irene Poulima , Mr. Alexa Lioupis*
HUNGARY	National Food Chain Safety Office, Food and Feed Safety Directorate, 1095 Budapest Mester u. 81., Hungary	*Mrs. Monika Csermely, Ms. An Istenes, Mr. Gábor Domány*
IRELAND	Public Analyst Laboratory - Sir Patrick Dun's, Lower Grand Canal Street, Dublin 2, Ireland	*Mr. John Keegan*
ITALY	Istituto Superiore di Sanità, Laboratorio Esposizione e rischio da materiali, c/o Dipartimento ambiente e connessa prevenzione primaria, Viale Regina Elena, 299, 00161 Roma, Italy	*Mrs. Maria Rosaria Milana*
LATVIA	Institute of Food Safety, Animal Health and Environment "BIOR", Lejupes Street 3, Riga, LV-1076, Latvia	*Mr. Guntis Cepurnieks*
LITHUANIA	National Public Health Surveillance Laboratory, Laboratory of Chemistry, Zolyno 36, 10210 Vilnius, Lithuania	*Mr. Gintautas Svilpa*
LUXEMBOURG	Laboratoire National de Santé, Division du Controle des Denrées Alimentaires, 1A, rue Auguste Lumière, 1950 Luxembourg	*Mrs. Carole Dauberschmidt, M Claude Schummer*
MALTA	Delegation to NRL-UK	
NORWAY	Delegation to NRL-DK	
POLAND	Laboratory of Department of Food Safety, National Institute of Public Health, ul. Chocimska 24, 00 791 Warsaw, Poland	*Mr. Jacek Postupolski*
PORTUGAL	ESB (Portuguese Catholic University - Biotechnology College – Packaging Department), Rua Dr. Antonio Bernardino de Almeida, 4200-072 PORTO, Portugal	*Mrs. Maria de Fatima Poças, M Céu Selbourne*
ROMANIA	National Reference Laboratory for Food Contact Materials - National Institute of Public Health - Dr. Leonte street, no 1-3, Bucharest, Romania	*Mrs. Oana Copoiu*
SLOVENIA	National Institute of Public Health of Republic of Slovenia , Dept of Sanitary Chemistry, Grablovičeva 44, 1000 Ljubljana, Slovenia	*Mrs Andreja Zoric*
SLOVAK REPUBLIC	National Reference Centre and Laboratory for material and articles intended to come into contact with food, Regional Public Health Authority In Poprad (RUVZ), Zdravotnícka 3, 058 97 Poprad, Slovak Republic	*Mr. Rastislav Rosipal, Mrs. Mil Syčova', Mrs. Jana Cimerman*
SPAIN	Spanish Agency for Consumer Affairs, Food Safety and Nutrition (AECOSAN), Carretera a Pozuelo- km 5.1, 28220 Majadahonda-(Madrid), Spain	*Mrs. Juana Bustos*
SWEDEN	National Food Administration, Chemistry Division, P.O. Box 622, 75126 Uppsala, Sweden	*Mrs. Susanne Ekroth*
SWITZERLAND	Official Food Control Authority of the Canton of Zurich, Fehrenstrasse 15, P.O.Box 1471, 8032 Zürich, Switzerland	*Mr. Gregor McCombie*
THE NETHERLANDS	Food and Consumer Product Safety Authority (VWA), Ministry of Economic Affairs, Agriculture and Innovation, Paterswoldseweg 1, 9726 BA Groningen, The Netherlands	*Mrs. Dita Kalsbeek*
UNITED KINGDOM	The Food and Environment Research Agency, Sand Hutton, York YO41 1LZ, United Kingdom	*Mrs. Emma Bradley*

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